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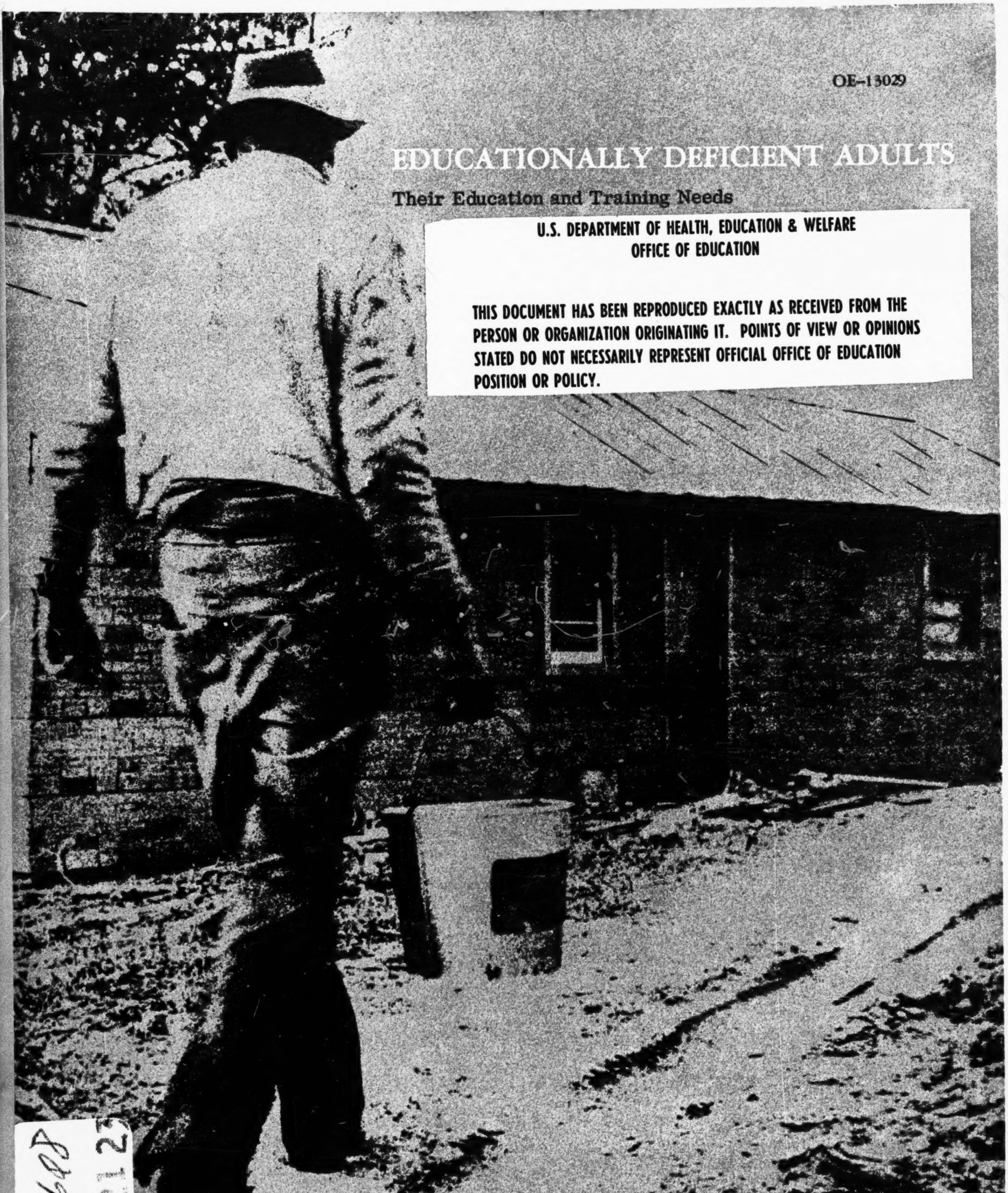
A survey of program administrators, interviews with program personnel and State employment service officers, and a research review were conducted to develop guidelines for meeting the occupational and training needs of undereducated adults. Data from programs in Pennsylvania, Arizona, Missouri, Virginia, West Virginia, the District of Columbia, New York City, and elsewhere were gathered on characteristics of educationally deficient adults, major program features, job and training opportunities, recruitment, screening, and testing, counseling and auxiliary services, and community involvement. Adult basic and vocational education (including job-oriented social training) for semiskilled and skilled occupations, united community efforts to recruit and encourage poorly motivated adults, close integration of literacy and job training, student grouping by ability, team teaching, instructor training, and research and development were among the major areas of need. Appendixes include a sample questionnaire, references, questionnaire respondents, programs and employment services visited, and a list of published materials used in the programs. (ly)



OE-13029

EDUCATIONALLY DEFICIENT ADULTS

Their Education and Training Needs

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Manpower Development and Training Program

EDUCATIONALLY DEFICIENT ADULTS

Their Education and Training Needs

The Report of a Survey Conducted by the
Information and Training Services,
A Division of McGraw-Hill, Inc.
New York, New York

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Anthony J. Celebrezze, Secretary

OFFICE OF EDUCATION
Francis Keppel, Commissioner

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FOREWORD

The Manpower Development and Training Act of 1962 initiated a concerted national effort to train and retrain the unemployed and the underemployed. Early experience in the training program, however, indicated that many of the unemployed did not have a sufficient background in basic education to profit from occupational training. Further, an analysis of manpower data showed very low enrollments in manpower programs for persons with less than a reported eighth-grade education. On the other hand, the unemployment rate of persons in this category was reported as being very high.

As a result of consideration given to this problem by manpower officials of the Department of Labor and of the Department of Health, Education, and Welfare, the State vocational agencies, which have responsibility for providing the occupational training, were authorized in September 1963 to include provisions for basic education in their training proposals. Subsequently, in December 1963 the Manpower Development and Training Act was amended to provide for a maximum of 20 additional weeks for basic education with training allowances. Persons needing basic education to benefit from occupational instruction may now pursue training with allowances for up to 72 weeks.

Of immediate concern to vocational educators in providing occupational training for the educationally deficient is the matter of identifying effective instructional materials for adult basic education. Recognizing this, and similar problems, the Division of Vocational and Technical Education authorized and participated in this study.

Walter M. Arnold
Assistant Commissioner for
Vocational and Technical Education

ACKNOWLEDGMENTS

This study was carried out as a joint project by the Division of Vocational and Technical Education, U. S. Office of Education, and by the Information and Training Services, a Division of McGraw-Hill, Inc.

The researchers wish to acknowledge the contributions of public school, private foundation, and MDTA program administrators whose responses to the questionnaire provided valuable data for the report.

Special acknowledgment is due to those training program administrators and State employment service officials in Washington, D. C., Phoenix, Pittsburgh, St. Louis, Charleston, Richmond and New York City who gave generously of their own and their staffs' time during the researchers' on-site visits and interviews.

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EDUCATIONALLY DEFICIENT ADULTS

Their Education and Training Needs*

PROBLEM

A great deal of attention has recently been focused on the problems of educationally deficient adults with respect to their ability to assimilate job training and to qualify themselves for available jobs. The unskilled and the undereducated have largely been "screened out" of regular training programs provided under MDTA, ARA, and other Government-sponsored training projects. Their limited preparation has made their acceptance into current training programs virtually impossible. As a result, they cannot hope to compete for available jobs which make ever-increasing demands in skill, training, and education.

Almost every study of employment and unemployment conditions points up the importance of skill, training, and education in the labor market. The highest unemployment rates exist among the unskilled and the undereducated. At the other end of the scale, however, unemployment rates are extremely low among skilled, better-educated workers. There is a diminishing number of even low-skilled job opportunities for the educationally deficient adult, while the demand for skilled workers is increasing. Even the outright creation of large numbers of low-skilled jobs would provide only a temporary solution to the unemployment problem of these adults. These individuals must somehow cross the barrier that cuts them off from the only promising job opportunities available—the skilled entry jobs or the semi-skilled jobs—or face a bleak future of unemployment or underemployment.

While the focal point of the problem of the educationally deficient adult is unemployment, there are many factors underlying this occupational problem. Part of the problem derives from what is broadly referred to as functional illiteracy. Another part of the problem is lack of marketable job skills. But the total problem is much more far-reaching. It is related to a complex of personal, social, educational, occupational, family, and community factors. The comprehensive nature of the problem would seem to call for a total approach to its solution. Thus, the solution presages newer, bolder patterns and directions in adult basic education; in pre-vocational and vocational training; in occupational counseling; in program materials, media, and methods of instruction; in the recruitment and motivation of unskilled, undereducated adults; in unprecedented co-ordination of the resources of industry, government, education and training, and labor, at National, State and local levels.

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*A study conducted jointly by the Information and Training Services, a Division of McGraw-Hill, Inc., and the U.S. Office of Education, Division of Vocational and Technical Education, under Contract OE-4-99-027.

The innovative nature of a total solution is itself a challenge. It will tax to the utmost the abilities of educational and job training specialists to design and develop new instructional systems that will effectively prepare jobless educationally deficient adults for a more productive and, hopefully, a more personally satisfying role in our economy.

OBJECTIVES

This report deals with a survey of educational and training needs of educationally deficient adults and with the development of guidelines for a plan to meet these and other interrelated needs.

The specific objectives of the survey, carried out in close cooperation with the Division of Vocational and Technical Education, U. S. Office of Education, were:

1. To determine the present characteristics, the levels of education and training, the aptitudes, interests, and attitudes of educationally deficient adults.
2. To analyze and interpret the survey information in order to establish starting points for the training of these adults.
3. To identify employment opportunities for these adults in a number of local labor markets.
4. To analyze the skill and knowledge requirements for available occupations identified in 3.
5. To ascertain normally available job training for these occupations.
6. To study a number of current adult education and training programs in order to determine existing patterns, practices, and needs.
7. To design a total training plan for meeting the needs of educationally deficient adults.

Thus, the ultimate objective of the survey was to organize pertinent information about, and to develop guidelines for, a solution to the occupational and training problems faced by unskilled, undereducated, unemployed adults.

SURVEY PROCEDURES

In carrying out the objectives of the survey, three basic procedures were used:

1. Questionnaires were mailed to adult program administrators. (See Sample Questionnaire, Appendix A.)
2. Personal interviews were held with adult program personnel and with State employment service officers. (See Interview Guide, Appendix B.)
3. Studies of related current research were made. (See References, Appendix C.)

Information was gathered through mailed questionnaires from knowledgeable adult literacy and vocational education program administrators and through personal interviews with administrators and staff personnel of MDTA, ARA, public school, and private foundation programs in a number of diversified areas in the United States.

Questionnaires were mailed to 36 adult literacy and vocational education program administrators recommended by the Division of Vocational and Technical Education of the U. S. Office of Education. Fourteen questionnaires were completed and returned. (See List of Questionnaire Respondents, Appendix D.) Seven adult programs were selected, on a widely representative basis, for personal visit and depth interviews. (See List of Programs Visited, Appendix E.) Interviews were then conducted by three researchers.

During the course of these visits, the researchers also visited local State employment offices serving the general areas in which the surveyed training projects were located, and interviewed the responsible officers. (See List of USES Offices Visited, Appendix F.)

The questionnaire and interview data were correlated with other previous and related research concerning educationally deficient adults, their employment, and their training. This three-dimensional approach constituted a diversified data base for the findings of the survey.

SURVEY FINDINGS

Scope of the Findings

It appears appropriate at this point to offer some general comments about the nature, the scope, and the limitations of the survey findings. The researchers found that while literacy and basic education for adults is one of the oldest of the adult education movements, most such programs are oriented toward vaguely defined civic, social, or personal goals rather than clearcut occupational goals. Only a few programs actually offer literacy skill as an essential tool for getting, keeping, and progressing in a gainful occupation. This situation is apparently changing in the light of strong evidence now available from MDTA projects regarding the direct relationship between educational level and unemployment. Awareness of this relationship is likewise reflected in the recent amendments to the Manpower Development and Training Act which recognizes basic education as a prerequisite for undereducated adults who wish to enter MDTA programs to train for existing job opportunities.

The fact remains, however, that the present trend toward literacy skills, regarded as occupational tools, is recent and most traditional adult literacy programs do not yet reflect this trend. In fact, only a few of the programs surveyed exhibited a job-oriented approach to literacy training, and few showed an effort to integrate basic literacy skills and occupational skills in a single program. For example, New York City, while it has offered adult literacy education both to native- and foreign-born adults since the 1880's, is only now designing integrated curricula for its educationally deficient adults.

The researchers, therefore, found few programs which, upon investigation, seemed likely to provide guidelines for meeting both the educational and the training needs of undereducated adults. Moreover, even the few identified for study were experimental or demonstration programs for which terminal data were not yet available.

Thus, it became clear, in the early stages of planning, that the findings would necessarily be limited to a relatively few representative projects. It was also clear that the stabilizing influence of large amounts of data was hardly possible, and that the raw findings would constitute a somewhat fragmentary and sometimes conflicting body of statistics, facts, and experienced judgments. An analysis of the questionnaire items (Appendix A) reflects this assumption. Only three of the questions are statistically quantifiable, while the rest are about equally divided between factual questions (concerning programs, materials, instruction, etc.) and those eliciting informed opinions and judgments.

For these reasons, the researchers made an attempt early in the survey to "qualify" the programs to be studied. The questionnaires mailed to 36 program administrators suggested by the U. S. Office of Education elicited 14 responses. Further qualification of these 14 responses led to the selection of 7 programs for personal visits and interviews. Even the selection of the final 7 was further influenced by direct telephone communication with the 14 questionnaire respondents. Once the 7 programs were selected for interview, it was logical to limit the employment service interviews to those local offices serving the areas in which the programs were offered.

A pragmatic approach to the survey appeared feasible for two other reasons. First, the research organization's previous experience in analyzing industrial and business problems and in designing training solutions to these problems on the basis of limited information has at least some relevance in an approach to the current training problems of educationally deficient adults. The ultimate objective of the present survey was to develop guidelines for solving the training problems of these adults, using the limited information available. Consequently, it was assumed that the eventual guidelines would be largely empirically based.

Secondly, the three survey information sources were widely diversified. Thus, the researchers felt that the final correlation of all survey data would tend to provide a trustworthy check on the reliability of the findings. Therefore, any data not reasonably confirmed by all the diversified sources, would be considered suspect and would need to be either discarded or used with qualifications.

It is in the light of these assumptions and practical considerations that the survey findings should be regarded.

Organization of the Findings

As previously stated, the findings of the survey were obtained from three diversified sources—program personnel, employment service officers, and previous research. Correlation of the information from these sources necessitated the use of some arbitrary structure around which the survey data and information could be marshaled. Consequently, applicable findings from any or all of the three sources were grouped around several broad categories, and these categories themselves were further subdivided as dictated by the nature of the survey information. The survey findings appeared to the researchers to group most naturally around the following major categories:

Characteristics of educationally deficient adults

Job and training opportunities available to these adults

Recruitment, screening, and testing

Major features of the programs surveyed

Counseling and auxiliary program services

Community involvement.

Survey information concerning each of these categories and their subdivisions is detailed in this section of the report.

Characteristics of Educationally Deficient Adults

Population Data. In the absence of exact figures, it is difficult to estimate the size of the educationally deficient adult population in the United States. It can be deduced, however, by analysis of currently available Labor Department figures. The following table shows that in March 1962, there were 19,821,000 persons in the United States 18 years and over, who had completed less than 8 years of school. While this entire group can be considered undereducated, 8,494,000 of them were employed and 816,000 were unemployed. An additional

10,511,000 were not in the labor force. (See footnote)

Employment Status and Education of Population

18 Years and Over with Less than Eighth-Grade Education*

Years of school completed	Total	Employed	Unemployed	Not in Labor Force
None....................	2,012,000	544,000	42,000	1,426,000
1-4.....................	5,727,000	2,272,000	261,000	3,194,000
5-7.....................	12,082,000	5,678,000	513,000	5,891,000
Total...................	19,821,000	8,494,000	816,000	10,511,000

*Table B, p. A-6, Special Labor Force Report #30; "Educational Attainment of Workers," March 1962, U.S. Department of Labor (from Monthly Labor Review May 1963)

The registered unemployed—the 816,000 with less than an eighth-grade education—would appear to be the most likely group to benefit from employment or from training which leads to employment. However, only 2.7 percent of all MDTA trainees enrolled in 1963 programs had less than 8 years of schooling. An eighth-grade educational level, therefore, appears to be the threshold to job training opportunities so far offered under MDTA. For that reason, these 816,000 must be considered a significant part of the educationally deficient adult population.

Of the 8,494,000 employed persons with less than eight years of school, there are necessarily some—perhaps 5 percent--who might normally be expected to experience unemployment and require basic education and job training for new or upgraded jobs. This would add about 425,000 persons to the undereducated jobless category, bringing the estimated total of educationally deficient adults, at this point, to a 1,241,000 potential.

Finally, there is the huge group of 10,511,000 persons not in the labor force. Although a very large percentage of these persons would not normally be employed, labor statisticians assert that a number of persons in this group are the so-called "hidden" unemployed. These are persons who are not registered at employment service offices, are not counted among either

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"Not in the labor force" refers to all persons 18 years old and over who are not classified as either employed or unemployed. This group includes persons who have stopped seeking employment because of limited education and training, lack of job opportunities, or inability to find or keep a job. It also includes housewives, students, the aged, etc., who do not normally seek employment.

employed or unemployed, but who are capable of gainful employment. In the much-publicized Appalachian Mountain region, for example, where the unemployment rate is 7.9 percent, officials estimate that there are enough hidden unemployed among the 15,000,000 population to boost the actual male unemployment to 15 percent and female unemployment to 21.4 percent. There are, perhaps, about 1,000,000 such persons, not in the labor force, who could either work or would benefit from training in preparation for work. These one million added to the 1,241,000 already mentioned, brings the estimated total of unemployed educationally deficient adults to roughly 2 1/4 million persons.

This 2 1/4 million represents, at least roughly, the part of the population which has the greatest need for employment, basic education, and job skills training. It is a widely mixed group containing Selective Service rejectees, Mexican-American migrant workers, Puerto Rican city dwellers, white natives, Negroes, and American Indians on reservations. Some of the non-natives, such as Puerto Ricans, are functionally illiterate not only in English, but in their native language as well. Other non-natives are well-educated in their native cultures, but illiterate in English and therefore are often underemployed.

Figures on education and unemployment for at least three of these groups—American Indians, Mexican-Americans, and Selective Service rejectees—help to illustrate further the fact that the estimate of 2 1/4 million undereducated, unemployed, is a conservative figure. For instance, there were 524,000 American Indians in the United States in 1960—about two-thirds of them living on reservations. Their unemployment rate reported in that year was 14.5 percent. About a third had less than an eighth-grade education.

Also, in 1960 there were 1.4 million Mexican-Americans. One out of every four of those aged 14 or over had had no schooling, and an additional 30 percent had completed fewer than 5 years of school. Unemployment among Mexican-Americans was 8.9 percent.

Finally, one of every six registrants fails the Selective Service pre-induction educational achievement test. Selective Service estimates that if all young men turning 18 in 1964 were examined, 220,000 of the total 1.4 million would be rejected on educational grounds.

Age. Questionnaire and personal interview data show an age range for enrolled trainees between 16-70, most of whom were between the ages of 21-40. According to MDTA data, only about 10 percent of older workers (45 and over) enrolled in MDTA programs in 1963. MDTA training programs, therefore, are apparently not reaching a large proportion of older workers even though these programs are open to them.

Age ranges in typical programs surveyed during this study were: Peoria (Ariz.)—16-60; Washington (D.C.)—22-62; Ontario (Oreg.)—16-60; St. Louis (Mo.)—19-21 (a youth program); Rochester (N.Y.)—20-35; Richmond (Va.)—20-50; New Haven (Conn.)—20-50; Indianapolis (Ind.)—16-70; Niagara Falls (N.Y.)—16-70.

Sex. In five of the program locations surveyed (Peoria, Washington, Niagara Falls, Ontario, and Seattle) trainees were about equally divided between men and women; in three others (Pittsburgh, St. Louis, and Rochester) only men were included; two (New Haven and Indianapolis) had more females than males. One (Richmond) had 60 percent males and 40 percent females. The proportion reported as enrolled in all 1963 MDTA programs was 41 percent women and 59 percent men.

Education. The educational levels indicated for the undereducated in Department of Labor statistics are those reported to trained interviewers by limited samplings of the population at a given point in time. There are indications, however, that reported educational level may be considerably higher than actual educational achievement. While there was only one instance among the programs studied where this disparity was actually measured, program staff personnel almost invariably noted it in their questionnaire responses and interview comments.

At the Armstrong Adult Education Center, in Washington, D. C., 54 trainees enrolled in an MDTA Maintenance Service program showed an average educational level of grade 4.6. But actual average reading ability, determined on the basis of the Gates Reading Survey Form I, was shown to be grade 1.4.

William F. Brazziel, Director of General Education, Norfolk Division, Virginia State College in his paper, "General Education in Manpower Retraining Programs," writes:

> "...it is not uncommon to find large numbers of persons who perform at levels of achievement which are two and sometimes three grade levels beneath the grade completed in school."

It seems clear that some disparity exists between completed schooling and, at least, actual reading level.

Learning Capacity. This characteristic was investigated to a limited extent in the survey. It involves the native ability of educationally deficient adults to achieve the acceptable levels of education and training required for at least semi-skilled jobs. In the absence of more objective evidence, this capacity was rated "low" to "average" by the questionnaire respondents. Since most I.Q. tests are designed for those possessing a considerable level of literacy skills, many program administrators found they had no reliable yardstick for measuring this capacity. Then, too, the GATB commonly used by the employment service does not, in the opinion of some, give an accurate measure of this capacity. Actually, most program administrators and employment service officers were more concerned with the ability of trainees to meet measurable minimum program entry requirements than in their capacity to reach higher levels of education and skills. Apparently, it was felt that if the trainee met the minimum entry requirements to a program, the program itself would eventually weed out the untrainable. One program administrator indicated that a 70 I.Q. (Otis) appeared to be the minimum mental capacity for entry into a youth program which provides training in such vocational areas as Food Services, Health Services, Office Services, Automotive Services, Building Maintenance, and Industrial Production.

Employability. Responses to questions about the physical and mental employability of educationally deficient adults usually elicited a rating from "low" to "average," as they did for the queries on learning capacity. An analysis of the responses on both learning capacity and on employability, however, reveals no further perceivable correlation between the two characteristics. Most program administrators considered these adults to have low employability, not for lack of sufficient mental or physical capacity, but because there were limited local job opportunities. However, one administrator rated employability as "unlimited."

Motivation and Attitudes. It was in response to queries concerning the motivation of educationally deficient adults that there was practically unanimous agreement among program administrators and employment service officers. Almost all responses agreed that motivation was "low." This is particularly evident in the difficulty of recruiting trainees. Several employment services, for example, reported that it was necessary to contact 10 persons in order to recruit 1 trainee.

Stemming as it does from many causes, lack of motivation appears to be a dominant characteristic of the educationally deficient adult group. There were, during the course of the survey, many conjectures made as to the causes of this lack of motivation, but few solutions to the problem were readily available. Most of the interviewees considered the lack of motivation a complex of many social, educational, and occupational problems. These ranged from an "I don't care" attitude to "a sincere desire to progress, but helplessness in the face of the many obstacles to be overcome."

One statement of the motivational problem, and an approach to its solution, is reported from New York City:

> A serious deterrent, obstructing suitable job placement, affecting a segment of the men and women from among the hard-core unemployed, will be a lack of motivation, which in some cases will be reflections of emotional disturbances. These problems are often a greater barrier to employment than lack of job skills, causing antagonism toward employers, associates and sometimes the law. The Board of Education will provide appropriate psychological counseling to assist the trainees, during the training period, to adjust to the realities of the labor market and to develop motivational drives.

Enough evidence was at hand to identify the problem of trainee motivation as perhaps the greatest to be overcome in meeting the education and training needs of educationally deficient adults and, possibly, as the one least understood. The fact that this problem is little understood appears in current practices for recruiting the trainees. The MDTA programs surveyed had neither appropriations nor staff adequate for the unexpectedly heavy job of recruiting educationally deficient adults. Neither did the State employment services which are held chiefly responsible for trainee selection. At The Norfolk Division of Virginia State College, a massive preliminary campaign to retrain illiterate Negroes revealed that poor Norfolk Negroes almost automatically rejected the chance for training. Once signed up, it was a tremendous task to keep many of them enrolled. The college takes the view that most efforts to reach the hard-core unemployed in fact ignore the most disadvantaged and service the most accessible and the most promising.

In order to recruit 75 trainees for MDTA programs at the Dysart Adult School in Arizona, the Migrant Indian Ministry, a private organization associated with the World Council of Churches, contacted 900 farm workers' families at its own expense, using its own volunteer social workers. Thus, a private organization had to step in and do the recruiting of trainees because the Arizona State Employment Services had no funds appropriated for this unusually heavy recruiting.

In spite of the difficulty of recruiting educationally deficient trainees, their attitudes appear to improve once they are enrolled in a program and begin to make progress. Richard D. Stapely, Director of the Dysart Adult Program, reports as follows:

> As a faculty, we have felt the great importance of allowing these people to experience success. As human beings they have for the most part during their lifetime had to

accept defeat from people more capable than they in the competition for jobs—and they have had to accept clothing and food which in many cases others do not want or cannot use. As a result, these people have withdrawn into a shell: the only thing of consequence to them is where the next meal is coming from. So in our program we are attempting to raise the horizon for them—or broaden their outlook on life—and one sure way we are having success in this is by allowing them to experience success... This psychology is paying off by rewarding us with very interested students.

The attitudes of trainees are affected by a complex of problems which set up barriers to the training of undereducated, unemployed adults. At the Armstrong Adult Education Center, reports Lawrence Baylor, MDTA Director, "Trainees in the MDTA Service and Maintenance Program come from a long background of failure involving crowded housing, lack of employment, no money. If their subsistence checks are delayed, many will not even have the carfare to attend training sessions. Many come with a chip on their shoulder. In the early stages of the program, the biggest problem is developing confidence in the trainees that they do belong and that this program is for them."

Some program personnel report other attitudes, such as "Trainees are unaware of their deficiency and the fact that education is an answer to their problem" (Los Angeles); "The educationally deficient adult is reluctant to take the first step toward entering class" (New Haven); "Illiteracy, poverty, despondency because of lack of job opportunities" (Lark Foundation, Yakima, Wash.); "distorted knowledge of the world of work" (New York). On the other hand, their attitudes are characterized by some interviewees as "eagerness to learn," "encouraged by success of others like them," and similar favorable comments. Administrators thus express optimism about the favorable change in attitudes which trainees undergo once they begin to sense success.

Job and Training Opportunities Available

Job Opportunities. For the educationally deficient adult, few job opportunities exist in the face of declining demands for unskilled, undereducated workers. The U. S. Department of Labor reports show clearly that many of the occupations which traditionally absorbed the unskilled, undereducated worker are declining. Since 1949, for example, agricultural employment has declined at an average rate of 200,000 per year.

Sharp increases in farm productivity have stimulated a manpower shift to nonagricultural jobs. Yet the trend in recent years has shown a relative decline in manufacturing employment—about 5 percent in the last 15 years. Along with the shift in industrial employment has come an increase in white-collar occupations, such as professional, managerial, clerical, and sales. This increase in white-collar jobs has been at the expense of the manual occupations, so that by 1956, for the first time, white-collar workers exceeded the number of blue-collar workers. Even among blue-collar workers almost all increase in employment has been among skilled craftsmen although even this rate of growth is slowing. Actually, then, the number of jobs available for farm and non-farm laborers and semi-skilled workers combined has declined in the last 15 years.

Thus, practically all the occupations which now provide expanding employment opportunities require relatively long periods of education and formal training. Many of the jobs requiring little or no training which were traditionally available to workers with little or no training are now disappearing. Furthermore, in competing for even these diminishing low-skilled jobs, the undereducated, unskilled adult finds himself at a disadvantage compared to other unemployed but better-educated workers.

Training Opportunities. In the face of declining low-skilled job opportunities, the educationally deficient adult finds few opportunities to prepare himself for the most promising job opportunities now available. Most MDTA programs train for skilled entry and semi-skilled jobs and thus favor the relatively better-educated. For example, seven MDTA occupational training programs accounted for almost 40 percent of all trainees during 1963. These occupations were draftsman, licensed practical nurse, stenographer and typist, medical service aide, welder (skilled), automobile mechanic, and general machine operator. Of the 19,382 persons in training for these seven occupations, only 224, 2.7 percent had less than 8 years of school. Yet, March 1962 unemployment figures show that this undereducated group represented 20.2 percent of all unemployed persons.

The unskilled and undereducated were therefore largely screened out of regular training programs. MDTA training is predicated upon "reasonable expectation of employment" and is therefore tied closely with employers' hiring requirements. So a majority of trainees are good employment risks because they come from prime age groups (22-44 years) and have high school educations and some work skills. Thus, limited preparation was a key factor in screening out educationally deficient, unskilled adults. This problem has been recognized, however, in the 1963 amendments to the Manpower Development and Training Act. The intent is now to provide basic education to enable the unemployed to attain a level of preparation which will qualify them for regular occupational training opportunities.

Local Job and Training Opportunities. The preceding overview of the job and training opportunities available to educationally deficient adults was largely derived from U.S. Department of Labor reports. Information gathered during the survey concerning these opportunities substantially supports this overview. As previously mentioned, there were few job opportunities in the growing occupational fields for educationally deficient adults. The scarcity of these job opportunities had a direct effect on the training opportunities available. Under MDTA, only training programs which prepare trainees for immediate or near-future job opportunities can be approved. Since employer needs determine hiring specifications, employers naturally prefer the better-educated, better-trained workers, particularly those who can meet the job specifications with little or no additional training at the employers' expense. This tends to disqualify the unskilled, educationally deficient.

Furthermore, local job opportunities are frequently subject to shifting demands necessitated by economic or technological changes. If these changes are slow, there is time for the rather lengthy period of training needed to raise the education and skill levels of educationally deficient adults to the point where they meet job requirements. Frequently, however, the changes are rapid and the demand for specific skills is accelerated—a factor which favors the well-prepared person. But the situation is one which makes it difficult for responsible agencies to plan training that is keyed to job opportunities.

Despite the limited job and training opportunities available to undereducated, unskilled adults, a few programs were attempting to meet their special occupational and training needs. The following brief case histories show how three widely different communities are bridging the gap between the current educational and skills deficiencies of the undereducated unemployed and the training levels required for their successful job entry.

In the Washington, D.C. project, an MDTA-approved course in Service Maintenance was started in March 1963. Known as Project 6, this program aimed at providing essential education in reading, computation, and writing, and in vocational training, for men to enter building maintenance and for women to enter charwomen and chambermaid occupations.

Previously, the local District of Columbia Employment Services had estimated a demand for service and maintenance workers at 750, of which about 650 would need to be trained. The employment service, with the cooperation of Armstrong Adult Education Center, then set up the occupational training project to last 52 weeks (6 hours per day, 5 days per week). There were no formal educational requirements for this program. In fact, preference was given to the educationally deficient. A total of 54 trainees were enrolled—28 male and 26 female. The only requirements for entry were that the trainees had to be mentally and physically employable, unemployed, and on relief. The employment service interviewed about 150 persons in order to get 54 trainees.

Average age of the trainees was 41.5; 50 were Negroes, most of whom were born in Southern States. Educational background was grade 4.6, but average reading level was 1.4. All trainees were heads of households, with an average of 3.2 dependents.

Classes were conducted at the Armstrong Adult Education Center and included 780 hours of reading, computation, and writing; 700 hours of service maintenance training (including job practice); and 80 hours of testing and counseling.

Final reports on the results of the program showed that 19 trainees completed the 52-week program; 24 accepted employment before finishing; 3 were seeking employment; 4 dropped from the program; 2 were terminated; and 2 transferred to other projects. Tests given in December of 1963 showed an average reading level of grade 2.7—a gain of 1.3. The trainees indicated that they enjoyed the project and felt it very worthwhile.

The Armstrong project was the only integrated basic education and job training program surveyed for which complete final data were available.

The Dysart Adult School MDTA project represents one which was well under way, but for which final results were not available. It points up how one farm community is correlating training and occupational needs to prepare educationally deficient adults for locally available job opportunities.

The Dysart project, located in Peoria, West Mariposa County, Ariz., draws its trainees from two very small towns, El Mirage and Surprise, located approximately 25 miles northwest of Phoenix. People living in these two towns depend mainly on the seasonal farm work for their sustenance. The main crop is cotton; other crops include small grains, maize, alfalfa, lettuce, corn, carrots, and beets.

Automation in farm equipment (such as cotton pickers and automatic farm machinery) has made it increasingly difficult for these people to obtain work—even on a seasonal or migrant basis. Therefore, ever-increasing numbers of them depend on welfare and government agencies for support. These agencies, along with the Migrant Ministry, a private organization affiliated with the World Council of Churches, felt that giving money and food was not getting at the root of the problem.

A job survey conducted jointly by the Migrant Ministry and the Arizona Employment Services revealed that two job opportunities were available requiring 60 farm hands and 100-150 laundry press workers. However, it was impossible for these people to take advantage of the job opportunities for three reasons: (1) the language barrier (most being of Spanish descent); (2) the illiteracy barrier; and (3) the job skills barrier.

A pilot program was conceived to train 45 Farm Hands and 30 Laundry Pressers. The program had two basic objectives:

1. Literacy training in the speaking, writing, and reading of English; basic arithmetic; social training (courtesy, honesty, neatness, regularity, sanitation, and health); and some general studies in science, history, government, and geography.

2. Skill training for the farm hand and laundry presser trainees. This was to be accomplished by renting farm land and the equipment to actually operate the farm thereby giving each trainee practical on-the-job training. For the laundry presser group, equipment in an operating laundry was to be rented and used for on-the-job training.

The first phase of the program covered 480 hours (16 thirty-hour weeks) of literacy training for both trainee groups, which were organized according to literacy levels in small sections of 10-12 trainees. The literacy phase was to be followed by 14 weeks of on-the-job training for Farm Hands and 6 weeks of on-the-job training for Laundry Pressers. At the time of the survey, the program had entered its eleventh week, so no final results were yet available.

Entrance requirements for the program were rather broad—some understanding of English, capability of acquiring literacy skills to at least the third-grade level, good physical and mental health, evidence of intent to complete the training, age under 55. Records available showed that the enrolled trainees had an educational level of from 0 to the 12th grade, 80 percent were heads of families, and all were unemployed.

In New York City, another more comprehensive MDTA project for integrated literacy and job skills training for educationally deficient adults is in the planning stage. The following are excerpts from the New York City master plan for educationally deficient adults.

> The Manpower Development and Training Act of 1962 mandates us to seek out and train "persons who can be qualified for... positions through education and training. We are here proposing a massive work-oriented educational program to reach those persons in our community who lack the basic educational skills to qualify them for conventional occupational training and to make them competitive in the labor market. Up until now, most of the training programs under the Act have not been geared to persons of limited literacy.
>
> What is required, and what we are proposing, to bring this worker of limited literacy to the threshold of occupational competence is basic literacy training meshed with pre-vocational and vocational training. Experience indicates that, for many,

remedial education is enhanced if clearly related to work and provided in a training center other than a conventional school.

Without such a corrective program, we cannot hope to break the chain of poverty and illiteracy that links one generation to the next and has presented us with the phenomenon of third-generation relief families. To increase the upward economic mobility of our poor, to enable them to rise from their disadvantaged position, we must give them the tools. The basic ones are the three R's related to the world of work.

This project is designed to serve that portion of unemployed adults in New York City, with less than a high school education, who have neither marketable skills nor vocational interests and have heretofore been unable to compete in the labor market except for the most elemental manual jobs. Trainees selected for this program will be from 22 years of age and up. They will be those disadvantaged men and women who are in need of both job orientation and/or basic education. It is anticipated that approximately 2,000 such men and women will be recruited for this project.

The New York State Employment Service will be responsible for selection and referral of those adults desiring to enter the program. The cooperation and assistance of community agencies will be sought in the recruitment of potential trainees.

The principal objectives of the project are: (1) To provide the participants with an introduction to broad fields of work and remedial training geared to individual needs in reading, writing, basic arithmetic, spelling and other language skills. The basic education will be oriented to several broad vocational objectives; (2) To provide training in specific occupations at the entry level for each trainee as his particular need and vocational potential is identified. Each trainee will progress from the basic academic and broad group orientation program to specific vocational training as soon as the project staff feels he is adequately prepared and qualified to undertake specific occupational training. There will be no time gap for the trainee between the completion of the orientation and basic literacy phase and the specific occupational training phase. Qualified candidates for training may enter the program on a frequent schedule to be arranged with local educational authorities. Should the number of candidates for any one specific occupation be too small to establish a class, education officials will arrange for individual referrals to on-going classes in appropriate private or public schools.

These three brief case studies merely highlight some characteristics of programs designed to solve the educational and training needs of educationally deficient adults. What is particularly noteworthy in the Washington, the Dysart, and the New York approaches is the emphasis on the integration of literacy and job skills in single programs to prepare trainees for existing jobs determined by survey to be locally available.

Recruitment, Screening, and Testing

Recruitment. Recruitment of educationally deficient adults for MDTA training programs is left almost entirely to the local employment services which are required by the law to select the trainees. Even though other community agencies may initiate referrals of trainees, these are generally cleared through the employment services.

Many practices are followed in inducing educationally deficient persons to participate in literacy skills programs. Those found most effective in the judgment of program administrators were employment service referrals, social agency referrals, and personal interviews. Recruiting methods used by program administrators are described by the following excerpts from returned questionnaires.

> Brochures, radio spot announcements, house-to-house contact, cottage meetings, notes sent home with children (Dysart)
>
> USES referrals (Washington)
>
> Notify and visit known leaders and then make personal approaches (Ontario, Oreg.)
>
> Adults who succeed are quick to spread glad tidings to others (Pittsburgh)
>
> Offer vocationally slanted training to maintain interest (St. Louis)
>
> Pleas from ministers, urging by Settlement Agencies and admonishments by administrators and teachers have been effective in the order listed. Public media has been doubtful with the exception of one half-hour program on television in January of 1963. (Rochester)
>
> Cooperation with Welfare Department; interviewing (Niagara Falls)
>
> The use of community committees at the neighborhood level to develop interest (Richmond)
>
> USES and other agency referrals, personal interview, and follow-up with individuals. With groups, invitations are sent to homes (through school children) to attend a demonstration lesson, followed by individual conferences and visits to a literacy class (New Haven)
>
> Many are brought in by friends who are also in the class (Lark Foundation)
>
> Group therapy and success stories of persons they know personally (Indianapolis).

Some of the foregoing comments are made by administrators in public-school and private-foundation programs which have no direct tie-in with employment services, as do the MDTA programs.

Screening and Testing. Screening of trainees under MDTA programs is usually carried out by the employment services according to the training requirements established for a particular program. For non-MDTA programs, the practices range widely between objective and subjective screening.

In Washington, D.C., trainees were expected to meet only very broad criteria for entrance into the MDTA Service Maintenance program. Trainees were eligible if unemployed, on relief, and mentally and physically employable. Once enrolled, however, the following tests were used to determine reading level and I.Q.: Gilmore Oral Reading Tests, Forms A and B; Gates Reading Survey, Forms 1, 2, 3; non-verbal I.Q. test (not further identified).

In St. Louis (an MDTA youth program), trainee screening was based on these criteria, but the entrance requirements excluded illiterate persons:

1. Meet established norms on basis of GATB for specific job training.
2. Meet established norms on basis of GATB K. F. M. for specific job training.
3. No major criminal record.
4. No evidence of alcoholism or dope addiction.
5. General attitude, emotional stability, and appearance should be such to assure acceptability by employers.
6. No physical disability that would preclude skill training or employment as a skilled worker.
7. Honorable discharge from Armed Services, showing no psychotic tendencies.

The GATB (General Aptitude Test Battery) used by the employment services depends upon sixth-grade achievement in language skills to obtain accurate results. It is therefore hardly suitable for evaluating potential trainees who have severely limited reading ability. In some employment service offices, interviewers frequently used rough rules of thumb to determine whether or not a person could read and write, such as asking him to complete forms, to sign his name or to read instructions. Several of the offices reported that a literacy test for USES use was in process of development and was badly needed.

At least three program administrators (Dysart, Washington, and St. Louis) emphasized the fear of formal tests that prevails among undereducated trainees. Consequently, informal methods for identifying those in need of special or remedial training were often used, such as class or workshop observation of the trainees' work habits and approaches to problems.

Major Features of the Programs Surveyed

Kinds of Programs. Almost all current programs offer reading, writing, and arithmetic as the major elements with other subject areas as minor elements. Four of the programs surveyed offer integrated literacy and job skills training.

For practical purposes, all programs for educationally deficient adults can be divided into two major categories—those which are basic and those which are integrated.

The basic literacy programs, so-called, are offered mostly by public schools and private foundations and have been under way for many years. In St. Louis, basic reading and writing courses are held 2 nights a week for 2 hours each week for a 15-week term. In St. Louis also, English for the foreign-born is offered on a similar schedule.

The New York City public schools have offered day, evening, and summer evening classes for many thousands of educationally deficient adults since the 1880's. Some of these programs are intended for the native-born illiterate and others for the foreign-born. Other programs, typified by the St. Louis and New York programs, were offered in every community surveyed. Their basic purpose is to prepare undereducated adults to assume the fuller participation in community, social, and civic life which is made possible by the ability to read and write and compute. They are not specifically job-oriented, although some recognition is given to the fact that the development of literacy skills is an occupational asset. Thus, such basic literacy programs have tended to be more culturally oriented than job-oriented. Many of the students are already gainfully employed, have a sincere interest to better themselves, and are consequently rather highly motivated.

Again, the sheer necessity of learning the language as a means of oral and written communication has led many foreign-born to enroll in such programs. Thus, the Immigration Service, the Bureau of Indian Affairs, many private foundations, and practically all metropolitan public-school systems have traditionally provided numerous programs at public or private expense for the functionally illiterate—native- or foreign-born.

These established adult literacy programs, however, seem to have little effect on the eradication of adult illiteracy. The U. S. Department of Labor in its Manpower Research Bulletin #5, "Family Breadwinners: Their Special Training Needs" reports that, of the almost 3 million adults enrolled in public school education programs (1958-59), less than 2 percent were taking courses to improve their ability to read and write.

Integrated literacy and job skills programs are a relatively recent development, spurred mainly by the seriousness of the unemployment problem. A sizeable portion of the population (an estimated 2 1/4 million) are unemployed for reasons that appear directly related to a lack of education and job skills. Recent federally sponsored programs, such as the Area Redevelopment Act and the Manpower Development and Training Act, started out primarily to train or retrain employable persons for existing jobs which were closed to them because of their lack of job skills. It became evident, during the course of the projects offered under these programs, that many could not even begin job training because they did not have the basic educational background to profit from the training. It was clear that many educationally deficient adults needed not only job skills but fundamental literacy skills as well. Thus, evolution of the concept of integrating fundamental education and job skills was a natural one. This development has only recently received impetus from the 1963 amendment to MDTA which now provides for fundamental education under these government-sponsored programs as preparation, when needed, for job training.

It is this integrated type of occupationally oriented fundamental education and job skills program which, in some form, is being offered in Arizona, Missouri, Washington, D. C., and a number of other states as demonstration or experimental programs—and are in the planning stage in New York City and elsewhere. Such programs were the main concern of this study, simply because they appear to offer realistic solutions to the education and occupational problems of educationally deficient adults. Features of this type of program were studied most carefully for indicators and guidelines that might prove useful to other program administrators attempting to cope with the same problems. Where possible in this survey, however, the features of either traditional fundamental literacy programs or of traditional pre-vocational or vocational programs were noted for their relevancy to the solution of the overall education and training problems of these adults.

In the survey, significant characteristics of various types of programs were studied—program content, program materials and media, instructional methods, program staff, counseling and auxiliary program services, related community problems, and other features. These features are detailed in the findings which follow.

Program Content and Organization. In the integrated programs surveyed, efforts were made to make all content meaningful in terms of the occupations for which the trainees were preparing. For example, reading and writing instruction was oriented to occupational vocabulary. Arithmetic instruction was likewise oriented to the job problems. Job-oriented social training was emphasized, such as neatness, regularity, ordinary courtesy, sanitary habits and other aspects considered a part of the job environment.

A few examples from some of the integrated programs that were surveyed will indicate how this content was organized.

In West Virginia, some of the MDTA programs proposed for 1964-65 were to contain balanced proportions of occupational training and basic education skills (including the communication skills of spelling, writing, and speaking; mathematics (including basic calculations, basic operations, percent and percentage, arithmetic and measures). Here follows a partial list of these integrated programs showing the proportions of occupational training and basic education planned.

	Hours of Training		Schedule	
Occupation	Occupational	Basic Education	Weeks	Hours
Auto Service Specialist	640	240	22	40
Building Maintenance	720	240	24	40
Carpenter's Helper	360	240	15	40
Cook's Helper	560	240	20	40
Custodian	300	240	18	30
Farm Hand, General	480	240	18	40
Housekeeper's Aide	100	80	6	30
Presser	200	120	8	40
Waitress	100	60	4	40

In New York City, a number of integrated programs are in the preparation stage. Two features of these planned programs are worth noting, because they represent refinements in the functional organization in a single program of occupational training as well as basic education elements. The first feature is that occupational training will be provided in a number of broad fields of work within a family of specific occupations. The following list comprises a preliminary selection of broad occupational fields and the specific occupations related to each work field in which persons completing the training will be accepted as entry workers.

Apparel Manufacturing and Related Fields
- Assembler III
- Checker

- Cleaner I
- Pinking-Machine Operator
- Presser, Hand
- Presser, Machine

Automotive Services
- Automobile-Service-Station Attendant

Building Services
- Maintenance Man, Building (handyman)
- Plumber Helper (repair and renovation)

Commercial Occupations
- Bookkeeping-Machine Operator I
- Key-Punch Operator; Verifier Operator
- Stenographer
- Typist

Costume Jewelry
- Bead Stringer
- Centrifugal-Casting-Machine Operator
- Manipulator
- Pearl Stringer
- Plier Worker
- Polisher II
- Solderer
- Stone Setter I

Distributive Occupations
- Inventory Clerk
- Order Filler
- Packer II
- Receiving Clerk II
- Shipping Clerk II
- Stock Boy
- Stock Clerk

Drugs and Cosmetics
- Coater
- Compressor
- Granulator-Machine Operator

Electronics
- Assembler, Miniature Components
- Electronics Assembler I
- Wirer and Solderer II

Food Preparation and Service
- Counterman, Cafeteria
- Counterman, Lunchroom or Coffee Shop (and Countergirl)
- Kitchen Helper
- Waitress

Hospital and Institutional Care
- Orderly

Machine Shop
- Machine Operator, General
- Machinist Helper

Merchandising
- Grocery Checker
- Sales Clerk
- Salesperson

Metal Fabricating
- Brake Operator, Machine
- Forming-Press Operator
- Punch-Press Operator I
- Power-Shear Operator
- Welder, Combination

Printing, Bookbinding, Paper Goods
- Collator
- Flexographic Pressman
- Gluer-off
- Plastic-Bag-Machine Operator
- Platen-Press Feeder II
- Printer's Helper
- Slotter Operator II

Textiles and Advertising Display
- Silk-Screen Printer

Woodworking
- Cut-Off-Saw Feeder
- Millman Helper
- Planer-Operator Helper
- Sander
- Woodworking-Machine Operator, General

The second feature of the New York City planned programs is their functional approach to literacy skills which closely orients these to the actual job. A sample page from the curriculum guide for the occupation, Housekeeper, illustrates this feature (pp. 22 and 23.)

In the integrated program offered at the Dysart Adult School in Peoria, Ariz., the organization of content for the Farm Hand and Laundry Presser programs was somewhat different. All literacy skills—reading, writing, arithmetic, job-oriented social training—were planned during the first 16-week (480-hour) phase of the program, with the laboratory (on-the-job) phase to follow later. The literacy phase, however, included job-oriented vocabulary, illustrations, and problems in an adult context. As in the New York plan, trainees were divided into three ability groupings for the literacy phase. Classes were limited to 15 trainees. The following outlines show the major elements of the integrated content.

Farm Hand

I. Literacy Training (480 hours)
   A. 120 hours reading, word analysis, farm vocabulary, farm records.
   B. 120 hours of writing and spelling, record-keeping, record analysis.
   C. 120 hours of basic arithmetic. Four processes: simple fractions, simple decimals, estimating cost, making change, time, distance, market prices, discounts, etc.
   D. 100 hours of job-oriented social training. Relationship with others, courtesy,

PART I - HOUSECLEANING

HOUSEKEEPER

MAJOR UNIT	READING - WORD STUDY	WRITING
1. Organization Orientation	Level I - My name is My address is My school is I learn housekeeping. Level II and III - above plus: I learn housekeeping in school. I learn how to read and write English in school.	Level I - Copying of words in sentences using signs. Level II - Dictation of short sentences taught. Level III - Fill out identification card.
2. Safety in the Home A. General B. Personal	Level I - Reading signs, short sentences. Turn on. Turn off. Turn up. Turn down. Which sentences say on, off, up, down. Phonics - ow as in low, slow, blow, show. Level II and III - I keep bottles on the top shelf. I keep medicine bottles in the medicine cabinet. I label medicine bottles. I keep matches away from children. Level I and II - Word Study Opposites - on. . . off up. . . down	Level I - Copying words in sentences taught. Level II - Dictation of sentences with underlined words. Level III - Dictation using additional words taught - work attire, bathing, appliances, cooking. Sentences with vocabulary words to be filled in as completion.
3. Minor Housekeeping tools	Level I - I sweep the rug (carpet). I sweep the carpet with the carpet sweeper. I clean the floor with the mop. I clean the floor with the broom. I clean the floor with the brush. Level II - I clean the rug (carpet) with a carpet sweeper. I dust the furniture and polish it with a cloth. I work with a sponge and rubber gloves. Level III - Text - English for New Americans, p. 17, 18. Reading - Word Study - All Levels - Phonics - sound of final "t" as in dust, must.	Level I - Copying of underlined words and sentences that were taught. Level II - Dictation of sentences using underlined new vocabulary with capitalization emphasized. Level III - Conversion of verbs to nouns - dust - duster, work - worker, polish - polisher. Sentences with verb to be changed to noun.

Sheet I

Key
T - Teacher
S - Student

Levels
I - Elementary
II - Intermediate
III - Advanced

*Underlined words are for spelling and word drill.

RELATED AREAS	INSTRUCTIONAL MATERIALS	EVALUATION
All Levels - Arithmetic I come to school 6 hrs. a day for 5 days a week. How many hours a week do I come to school? Speech - working housekeeping learning I work - I am working. You work - You are working.	T - Resource Materials in Civic Ed. for Adult Ed. Classes, Curr. Bull., 1957-8 N. Y. C. Bd. of Ed. p. 4-7. S - Level I and II - Pupil-teacher prepared signs and sentences. S - Level III - Identification Cards with names, address, school, course.	Level I - Flash Cards - name address Level II - Word Recognition Drill Level III - Answering Identification questions
Arithmetic - Numbers and concepts of oven heat increasing from 100 to 600. Science - Overloading of circuits causes fires. Social Studies - How to call Fire Dept.	T - Resource Materials in Civic Ed. for Adult Ed. Classes, Curr. Bull. 1957-8, p. 20-21; 73-74. S - "Making Your Home Safe" Film-strip #25160. 25 N. Y. C. Bd. of Ed. List of Approved Film Scripts 1964 "Safety Begins at Home" McGraw Hill 1946 - BAVI Instructional Films and tapes 1963. S-Level I - Signs and posters, bottle with poison on label. S-Levels II and III - Electrical appliances, pictures of fan, iron, toaster.	Level I - Flash cards combining words taught. Level II - Testing drills filling in words. Level III - Answering questions asked in film and filmstrip for comprehension.
Arithmetic - All levels Division... The housecleaner bought a bag of one dozen sponges. (12 - 1 dozen) for 96¢. Level II - How much does each sponge cost. Science - All levels - Effect of heat (radiator) for drying tools and rubber gloves	T - Resource Materials in Civic Ed. for Adult Ed. Classes, p. 19-20, 68-69. S - Manufacturers' Manuals on Housecleaning Materials and Tools.	Level I - Testing drills for word comprehension by sight recognition. Level II - Comprehension questions of new words - sponge, rubber. Level III - Make check list of housekeeping tools for "My Daily Cleaning Supplies" by completing words such as p_lish, rub_er.

SAMPLE PAGE FROM A NEW YORK CURRICULUM GUIDE FOR A PLANNED INTEGRATED PROGRAM honesty, regularity, promptness, neatness, concern for others, etc.

- E. 20 hours of safety.

II. Laboratory Skill Training (420 hours)

- A. 60 hours of lecture and demonstration of farm equipment.
- B. 160 hours of operation of tractor, plow, disk floter, listing machine, etc.
- C. 60 hours of irrigation.
- D. 30 hours of planting.
- E. 60 hours of cultivation and observation of growing crops.
- F. 30 hours of spray. Types of spray, frequency of operation, economics of spray.
- G. 20 hours of review of farm safety. High points of farm law, source of water, etc.

Presser, Machine

I. Basic Literacy Education

- A. Reading, word analysis - 90 hours
- B. Writing and spelling - 90 hours.
- C. Numbers (arithmetic) - 60 hours
  The four processes: simple fractions, simple decimals, making change, time, distance, etc.
- D. Social Training - 60 hours
  Relationships with others, courtesy, honesty, regularity, promptness, neatness, concern for others, etc.

II. Laboratory Skill Training (1 group, 15 students, presser cotton goods)

- A. Orientation - 40 hours
  Lecture and demonstration involving presser industry.
- B. Observation of actual presser work - 40 hours
- C. Performance doing the work of a presser - 160 hours

III. Laboratory Skill Training (1 group, 15 students, wool pressers)

- A. Orientation - 40 hours
  Lecture and demonstration involving presser industry.
- B. Observation of actual presser work - 40 hours
- C. Performance doing the work of a presser - 160 hours

The Armstrong program in Washington, D. C., integrated its content somewhat more closely than did the Dysart program. The general organization of the program showed 780 hours scheduled for Essential Education Training (reading, computation, writing), and 700 hours of Vocational Training (service maintenance). The following list shows the elements of basic education and occupational training included in the course.

ESSENTIALS OF INSTRUCTION

Techniques To Be Taught in Reading

1. Word attack skills (including phonetics)
2. Basic sight vocabulary
3. A meaningful, adequate vocabulary
4. How to read and understand directions
5. Simple study skills
6. Reading signs

7. Organization of ideas
8. Selection of main idea
9. Drawing conclusions
10. Selection of important details
11. Use of the dictionary
12. Reading maps and graphs
13. Filling out applications and other forms
14. Alphabetizing
15. Exercises to improve listening for understanding
16. Spelling

Techniques To Be Taught in Arithmetic

1. Handling money - making change
2. Budgeting money
3. Keeping accounts
4. Measurements
5. Areas and perimeters (simple)
6. Volume (simple)
7. Recognition of simple geometric figures
8. Adding, subtracting, multiplying, dividing of whole numbers and fractions as needed for learning the skills named above.
9. Simple problem-solving of the type needed for various jobs.

VOCATIONAL TRAINING

Service and Maintenance Activities

Hotels, Restaurants, Buildings, Offices, Laundries, Stores, etc.

Accounts for supplies
Cleans bathrooms
Collects and disposes of trash
Collects linen
Counts linen
Counts money
Dusts furniture and woodwork
Empties trash from waste baskets
Fixes window sash
Gets goods from stock
Installs hinges, window panes, wire screening
Loads and unloads trucks
Makes Beds
    Change
    Records of items received and delivered
Moves furniture
Observes safety measures
Operates and maintains appliances and equipment
    Clothes-drying machines

    - Coffee machines
    - Dishwashing machines
    - Ironing machines
    - Lawn mowers
    - Peelers
    - Sanding machines
    - Toasters
    - Vacuum cleaners
    - Washing machines
    - Waxing machines
- Paints
- Polishes
    - Fittings
    - Fixtures
    - Floors
    - Glass
    - Metals
    - Wood
- Refinishes wood
- Removes putty from windows; removes snow
- Replaces
    - Bulbs
    - Electrical extension cord plugs
    - Faucet washers
    - Fuses
- Replenishes stationery and bath supplies
- Runs errands
- Sharpens hand tools
- Splices electrical extension cords
- Stores goods
- Sweeps - with hand broom and vacuum cleaner
- Uses hand tools
    - Chisels
    - Foot rulers
    - Hammers
    - Planes
    - Pliers
    - Punches
    - Putty knives
    - Saws (hand)
    - Screwdrivers
    - Tape measures
    - Wrenches
    - Yardsticks
- Washes
    - Floors
    - Windows
    - Woodwork

Program Materials and Media. Adult-oriented basic literacy materials appear to be almost non-existent in spite of the long history of adult basic education in this country. Few texts, workbooks, or even curriculum or instructors' guides were found in use during the survey that could be judged adequate for meeting the fundamental education needs of educationally deficient adults. Most literacy materials were intended for children's use and therefore did not even approach literacy training in an adult context. The situation with regard to materials for instruction in reading is not quite so bad as it is in arithmetic, science, health, and the other basic subjects.

Almost all questionnaire responses and interview comments agreed on the need for adult literacy materials. The need is further corroborated by the January 1964, "Report of the Task Force on Adult Basic Education Instructional Materials and Related Media" by the U. S. Office of Education. This report concludes:

> One of the most critical problems in adult basic education is the dearth of suitable instructional materials. There is now, and will be increasingly in the future, a tremendous market for a comprehensive system of adult basic education materials. These materials must be "teacher proof" in as much as they will be used by teachers who have had limited training in teaching adults. The materials should be available at low cost and based on adult life roles and the ecology of education. The course content should attempt to integrate academic skills around central themes and tasks of an occupational nature, i. e., knowledge of the job, following procedures, concept using, work adjustment, and citizenship.

The survey itself showed that internally prepared and commercial literacy materials were most frequently used. Internally prepared materials were generally considered more effective because they were more closely adapted to adult needs.

The Armstrong Program, however, relied almost exclusively for reading instruction on commercial materials. It used Laubach's "Streamlined English" up to about the third grade reading level, and then used Reader's Digest Skill Readers, newspapers, and other available materials for intermediate and advanced levels.

The Dysart program used reading materials prepared and published by the school's literacy instructor. These materials were originally developed for children and were organized on three ability levels with workbooks and instructors' manuals. The instructor, however, had adapted the materials for adult use in her classes.

Neither the Washington nor the Dysart program used anything other than internally prepared materials on arithmetic. Standard texts were used in the other literacy skills.

The availability of vocational training materials for educationally deficient adults is far worse than that which prevails in literacy materials. Almost all current pre-vocational and vocational materials assume at least a sixth-grade reading ability. Furthermore, materials specifically oriented to the jobs for which trainees were preparing were non-existent in usable form. Consequently, Armstrong used instructor-prepared worksheets and study guides in its Service Maintenance program. New York City is planning and developing its own materials both for literacy and for occupational skills. A Cook's Helper program at Arsenal High School in Pittsburgh, Pa., used teacher-prepared materials as well as materials from the meat industry and American Canning Association.

While some of the programs surveyed attempt to integrate literacy and vocational training, there are no materials yet available which do so, with the possible exception of New York City's curriculum guides. The dearth of usable materials in literacy and occupational training was a primary concern of practically all program staffs.

Appendix G provides a list of typical literacy materials used in the programs surveyed. Occupational materials examined during the survey were mostly in the form of rough lesson plans, manufacturers' manuals, or other readily available types, and were not classifiable.

The comments of the Director of the Youth Program at O'Fallon Technical High School in St. Louis may provide some indication of the kinds of materials and media needed at a somewhat higher educational level than is characteristic of most undereducated persons. Mostly standard text materials are used because illiterates are screened out of the program by the entrance requirements. There is some use made of program outlines, instructor guides, and lesson plans in remedial reading and arithmetic, but the method of instruction is tutorial. Program materials most urgently needed for occupational training at O'Fallon are filmstrips, inexpensive text materials that reach the trainee rapidly, simplified blueprint reading, and sample trainer kits which acquaint trainees with such things as job application forms, time cards, and other items used in an actual job environment.

At least one New York City administrator commented on the need for simplified manufacturers' manuals organized for instruction purposes and for commercially prepared texts and workbooks in low-level basic reading which are job-oriented in content and illustrations, preferably inexpensively paper-bound—especially on beginner and intermediate levels.

Non-book instructional media, however, was much in evidence, particularly in vocational training for which excellent provision was usually made for instructional "hardware," equipment, and facilities. In literacy training, films, flash cards, and charts were commonly used. However, these media and the other audiovisual aids used were only infrequently organized in context with other program materials and were, therefore, seldom completely satisfactory from a pedagogical point of view.

Instructional Methods. All programs surveyed exhibited a combination of group and individual methods of instruction. Group methods used were ranked by frequency of use in this order: (1) Group discussion; (2) Demonstration; (3) Commercial TV; (4) Team teaching, open-circuit TV, and miscellaneous talks by outsiders.

Individual methods of instruction favored (1) Tutorial; (2) Self-study; (3) Programed instruction; (4) Student with student; and (5) Assigned homework.

No clear patterns concerning instructional methods emerged from the survey, perhaps because most instructors used group and individual methods according to the needs and varying abilities of the trainees. All were in agreement on the necessity of highly individualized instruction for educationally deficient adults. For this reason, no classes larger than 15 in number were observed during the survey.

In St. Louis, an MDTA Youth Program at the O'Fallon Technical High School uses the tutorial method exclusively for remedial instruction in the three R's. No trainees are admitted to this program, however, who do not have at least a sixth-grade achievement. Consequently, only a few require remedial tutoring.

Program Staffing and Training. Program staffing and staff responsibilities showed considerable variation in the programs surveyed. All programs, regardless of scope, had program directors. Instructors were almost invariably specialized either in literacy skills or in occupational skills. Most of the programs provided full- or part-time counselors. Practically all staff personnel were professionally qualified. At least three of the programs made provision for additional auxiliary service staffs to handle recreation, nursery care for trainees' children, or transportation. Program directors were, in all cases, experienced adult educators.

Instructors, for the most part, were certified teachers drawn from the local schools. About half of the instructors had had experience in teaching adults. A few teachers—with certification—were drawn from business and industry and the colleges. A few were trained volunteers without teaching credentials, but with good educational backgrounds.

The Dysart program had five teachers specializing in reading, arithmetic, social training, and skills training—1 for each 15 trainees, but no counselors. A social worker of the Migrant Ministry, however, provided some counseling and guidance, as did the staff. The Migrant Ministry provided a supervised nursery for children of the trainees attending classes. A Program Director supervised the entire program and provided liaison with other agencies and services involved. This program involved 75 trainees in two courses—Farm Hand and Laundry Presser. No provision was made for in-service training of instructors since all were experienced teachers.

New York City plans to recruit instructors from its regular teaching staff and from retired and substitute teachers, all of whom must be licensed. It will provide in-service training for this staff through 25 supervisors who will observe the instruction and make written and oral evaluations on the basis of their observations. Local adult education principals will be directly in charge of on-site programs. In addition, curriculum consultants and specialists will be available and will travel from program to program.

New York plans pre-orientation of the staff through work conferences which will introduce the staff to the curricula, outlines, and other related materials. In-service training is planned through frequent meetings, sharing of curriculum bulletins, sample lesson plans, and demonstrations of team teaching techniques. Considerable use of films and tape recordings is also planned as part of the in-service training of instructors.

Of the questionnaire respondents, 5 provided in-service training of instructors, 4 offered none, 2 held reading workshops, 1 used Laubach Literacy Fund materials and methods, and 1 relied on close supervision of instruction. At least 2 respondents stressed the need for recruitment, screening, and training of instructors and volunteer instructors.

Counseling and Auxiliary Program Services

The complex needs of educationally deficient adults, in the opinion of all program administrators, calls for well-planned guidance, counseling, and other auxiliary services in addition to the education and training provided in programs. Several interviewees stressed the necessity for pre-program, in-program and post-program counseling as a continuing process throughout the entire cycle of recruitment, training, job placement, and follow-up of the trainee. This need is thoroughly recognized in some programs, as the following examples indicate.

Counseling. The Armstrong program in Washington, D. C., provides for intensive guidance by scheduling counseling sessions for 80 hours of the 1,560-hour Service Maintenance Program. Guidance here consists of testing, group guidance (on problems common to the group), and individual guidance. The testing makes use of aptitude tests, intelligence tests, diagnostic tests, interest inventories, and achievement tests. Group guidance is considered important, but emphasis is placed on individual counseling to the degree that the counselor knows each trainee personally—his interests, capabilities, and potential—in order that he may adjust effectively. A full-time counselor is provided for the 54 trainees and carries out the following functions:

> Orientation of trainees; giving occupational information; counseling the individual; providing job experiences needed by the trainee; job follow-up; acquiring guidance materials; maintaining cumulative records; referrals of trainees to other special educational and community agencies; interpreting guidance data; conducting testing; encouraging trainee self-guidance; enlisting services of consultants in special fields; how to apply for a job; special interviews of trainees who are socially or emotionally maladjusted, those who are doing outstanding work, those who need financial aid, and those who wish to withdraw from training.

In the St. Louis Youth Program at O'Fallon Technical High School, guidance is intensive not only by counselors but also by instructors in classes and shops during a 12-week pre-vocational period. The counseling takes the form of providing the trainees with a realistic outlook on the work world and making them aware of the unaccustomed demands that working for a living will make upon them as compared to their present habits. It also helps trainees to sell their services and to complete application forms, time cards, and work orders. Four counselors are used in the Youth Program for about 220 youths enrolled in all pre-vocational and vocational programs.

Because most MDTA programs depend upon the local employment services for trainee referrals, much of the preliminary testing and guidance is left to the employment service counselors, whose primary function is either training placement or job placement. Consequently, they do not provide follow-up counseling. This is true of the Dysart program which has no counselors. The Migrant Ministry, however, provides part-time counseling through its local social worker. The Dysart program, still in its experimental stage, is, however, planning full-time counseling for future programs.

In New York City, special counseling, guidance, and testing for educationally deficient adults is clearly recognized in its plans for training 2,000 adults, as indicated by the following.

> Recognizing the existence of individual differences and concomitant individual needs on the part of the trainees, the techniques of special counseling, testing, and guidance will be utilized by the Employment Service and the Board of Education to identify and resolve each trainee's particular motivational, attitudinal, and vocational problems. Additional staff services, particularly in the fields of counseling and testing, will be required. These staffing needs supplement those provided for under standard allowances.
>
> Initial counseling and testing will be provided by the New York State Employment

Service to determine the broad field of work to which the trainee should be assigned. Employment Service counselors will be charged with the responsibility for continuous overseeing of the individual trainee's progress. It is recommended that Spanish-speaking counselors and test administrators be employed in order that testing and evaluation may be given in Spanish where necessary.

Each trainee will then be referred to a Board of Education counselor who will be provided with the broad vocational recommendations arrived at by the New York State Employment Service. When needed, a summary of the counseling will be forwarded to the Board of Education. The Board of Education will then determine the content of the basic educational training needed by the individual to qualify for vocational training within the broad field of work recommended by the New York State Employment Service.

Group counseling techniques will be included wherever desirable to acquaint men and women in the program with orientation to the world of work (proper grooming, etc.).

Arrangements will be made for both Board of Education and New York Employment Service counselors to evaluate the progress of each trainee during the initial vocational orientation program in order to decide whether a change should be made to another field of work. A determination will also be made while each trainee is undergoing the combined broad and basic introduction whether he or she shows sufficient interest and aptitude to continue with further training in a specific occupational field.

Since the period of instruction for individual trainees is not predetermined, the Board of Education, in consultation with Employment Service staff, will determine the point at which the trainee is ready for the exposure to job placement. The New York State Employment Service will make all possible placement efforts through the normal channels, special job development staff, and through cooperation of community agencies.

Because of the massive scope of this and the companion youth proposal, there is a definite need for a project coordinator, with appropriate staff, to coordinate all the employment service and educational activities from the preliminary screening phase for trainee recruitment through the counseling and training phases, to the final job development, placement, follow-up, and evaluation phases, after training.

This proposal is one of great magnitude... the project will necessitate staffing requirements different from any existing current formula. Counseling and testing requirements will be far beyond any standards of the past...

Auxiliary Program Services. Some of the programs studied recognized the need for auxiliary services to supplement training, counseling, and job placement. The Dysart program, for example, with the cooperation of the Migrant Ministry, provided nursery care for children of the trainees who were attending classes 6 hours a day. Grooming facilities were provided the trainees, such as electric razors, hair-cutting equipment, tooth brushes, and tooth paste. A supply of usable clothing was kept on hand for the trainees who wished to exchange their worn clothing. Recreation (volleyball, baseball, other sports) and certain social and "extracurricular" activities for both men and women were provided and scheduled for the last period of the day.

Both the Dysart program and the Armstrong program had established arrangements with local specialists to remedy eyesight defects which required glasses. Both provided excellent hot food which cost the trainees 40 cents a meal.

In St. Louis, the O'Fallon program made arrangements with a local YMCA to provide recreational and social activities for the trainees and even made transportation arrangements to take the trainees from the school to the YMCA.

These few examples suffice to point out the concern of program administrators for the "human" needs of their trainees in addition to their educational and occupational needs.

Community Involvement in Adult Programs

A mixed pattern of community attitude and community involvement in the needs of educationally deficient adults emerges from the survey. While there were some outstanding instances of community response to certain aspects of the problem, few programs showed evidence of strong, united local effort to approach the problems of educationally deficient adults on a broad frontal basis. Typical questionnaire responses concerning the coordination of community resources and efforts in this regard varied considerably.

> Churches, social agencies, government agencies, labor organizations, and schools have all cooperated beautifully by rendering such assistance as they have been called upon to render. (Dysart)
>
> Community cooperation is needed. So far the school has received cooperation from local opticians for eye examinations and from the Society for the Blind for needed glasses. Employers have cooperated well in job placement. (Armstrong)
>
> An attempt has been made. (Indianapolis)
>
> Very little has really been done. Some talk but little action. (Yakima, Wash.)
>
> Leading representatives of the Adult Literacy Committee meet regularly to work out community effort on adult literacy. Community Progress Inc., personnel coordinate most community resources. (New Haven)
>
> The agencies are interested but efforts are not well coordinated. It appears that the schools will have to assume the leadership in coordination. (Richmond)
>
> We plan to organize a recruitment team in the near future. (Niagara Falls)
>
> Community resources have to a degree assisted us by channeling individuals to our Centers. They have furnished us with visual aids that are meaningful in our instructional programs. They have appraised us of industry's needs in terms of literate workers. (Rochester)
>
> Projects are just getting under way such as the Human Resources Committee and Gateway for Youth Program. (St. Louis)
>
> We try hard to be the coordinator, but those who contribute must maintain a higher level

of interest. (Pittsburgh)

Local industry encourages these people to take literacy courses. The Council of Churches have offered classes in English during the summer. The Catholic Church with its Extension Division is giving help in housekeeping and English to the women. (Ontario, Oreg.)

An advisory group or Manpower Panel consisting of representatives of labor, management, education, apprenticeship councils, minority groups, government, community agencies, and the public will be formed... to give counsel to the project in all its phases. (New York)

Interview comments made during the survey touched upon these points: lack of community awareness and coordination of local efforts in related aspects of the programs; lack of sufficient funds; need for adequate follow-up of trainees after completion of training; shortage of available jobs for trainees at low levels, or jobs suitable for those with the least educational attainment. In one instance, the failure of unions and employers to lower job entrance requirements in education was cited as a barrier to the employment of educationally deficient adults.

From the survey information there appeared to be a dawning awareness in local communities of the inadequate education and training of many of their people.

CONCLUSIONS AND RECOMMENDATIONS

Meeting the educational and training needs of the educationally deficient adult poses a multi-faceted problem which involves an organization and a coordination of effort on the part of industry, schools, churches, social agencies, government at all levels, labor organizations. The educationally deficient adult has special problems, only some of which arise from the lack of basic education and training. While the educational and training effort poses a major problem, there are other related problems inherent in the preparation of the educationally deficient adult to enter and succeed in an occupation. Analysis of the survey data points to the following conclusions and recommendations:

1. Educationally deficient adults will need to be educated and trained to meet the basic educational and skill requirements of entry jobs in semi-skilled and skilled occupations. Training for existing, but diminishing, low-skilled jobs is neither realistic nor is it an ultimate solution to the problem facing these adults.

2. The training plan, or training system, should integrate both basic literacy skills and job skills in comprehensive programs that progressively lead the trainee from zero literacy and job skills to at least eighth-grade literacy achievement and semi-skilled job competence.

Because job-oriented social training is an integral part of job success, this area of personal development cannot be neglected. Many adults will need to develop a realistic awareness of the social and human relations aspects of the world of work; its demands in standards of conduct, physical appearance, dress, job customs, personal cleanliness, employer expectations; and many of the other commonly accepted mores connected with working for a living.

3. An important consideration of the adult occupational and training problem complex is the recruitment and encouragement of poorly motivated adults to enter and complete training as a prerequisite to productive employment. Consequently, the approaches to their recruitment, and the settings in which their training is carried out, should be conducive to adult motivation and learning and should conform to adult values.

4. Unprecedented efforts to identify adult trainees and to motivate their participation in the programs will call for united community action. Some of the approaches found satisfactory have been described in the findings, but the problem of initial motivation of the educationally deficient adult still remains. MDTA provides for the organization of local Manpower Advisory Committees which are familiar with an area's employment opportunities and manpower problems. These committees should give ample consideration to the difficult problem of reaching the potential trainee and getting him to take the initial step toward his own advancement by entering training. The employment services can do part of this job, but their efforts are limited largely to the insured unemployed and do not reach those not included in the labor force.

5. Basic education and job skills are best integrated within a correlated, interacting system of training and education. This system should be specifically adapted for stimulating adult learning and all its elements fitted into an adult learning context, enriched by the use of many resources, such as:

Adult-oriented basic literacy materials and pre-vocational materials.

Modern methods of instruction, such as programed instruction and team teaching, in addition to conventional methods of group and individual instruction.

Presentations and visualizations via live persons, television, film, recorded sound, field trips, laboratories, and workshops—all correlated with other program elements into an effective and cohesive teaching-learning system.

Instructional technology now available to industry, education, and government has evolved to the point where a comprehensive system for training educationally deficient adults is now possible.

6. Basic literacy skills should include adult reading, writing, arithmetic, related science, health and sanitation, and job-oriented social training as they relate to actual work environments.

The job skill training should first include multi-occupational, pre-vocational training directly oriented to semi-skilled and skilled entry occupations for which jobs are available upon completion of training. Pre-vocational training should then be followed by specific vocational and job training for occupations in which there are shortages of trained personnel. This integrated approach is conceived as functional rather than departmental, bringing in all related literacy, social, and occupational skills at points of job application.

It would appear necessary that integrated literacy and job skills training be organized on progressive levels to permit some measure of homogeneous grouping of educationally deficient adults. For example, pre-vocational trainees might be grouped according to three ability levels—elementary, intermediate, and advanced—with materials and instructional methods adapted to these ability groupings.

The preparation of literacy and job training materials and media within a peculiarly adult context calls for a departure from the conventional departmentalized approaches to literacy training and to vocational training. It demands, instead, a functional blend of the two areas of training. It is no longer realistic to teach unemployed adults literacy skills apart from job skills. Literacy skills are, in this sense, regarded as occupational tools; they go beyond traditional adult reading, writing, and arithmetic to include also basic science, health and sanitation, and social training—all meaningfully integrated with pre-vocational training.

Such integration of literacy and job skills training calls for greater articulation between literacy skills instructors and job skills instructors. The traditional separation of literacy and job training must be broken down by functionally integrating the two areas in a common attack on both illiteracy and lack of job skills.

7. Methods of instruction, particularly in the pre-vocational phases of training, should be highly individualized with special emphasis on tutorial, remedial, small-group, and team-teaching methods. The team-teaching approach would seem to provide an effective means of integrating all basic elements of the training program—materials, media, and instruction.

There is need for acceleration of the learning process, similar perhaps to the four-step job instruction training technique successfully used during World War II which often reduced training time to 50 percent of previous methods.

8. Pre-service and in-service training of new and experienced instructors should be included as a regular part of the training system on the assumption that many inexperienced or retrained instructors will be needed both to conduct programs and to supplement individual and team efforts of a relatively few experienced adult instructors.

Well-planned program and curriculum guides will be needed for the use of adult program administrators, instructors, and counselors to serve as the starting points for adapting program elements to specific trainees' needs in many local areas. These are now either unavailable or nonexistent at the training levels needed. These guides would further serve their purpose by establishing workable plans for integrating the efforts of literacy and job skills instructors with those of counselors, employment services, and employers.

Instructor guides and detailed instructors' manuals, integrated with other program elements and media, will be essential to effective instruction. They would also serve a purpose, beyond the curriculum guides, of giving direction to the individual and team efforts of the instructors, and direct the programs toward pre-established goals.

9. Job-oriented trainee counseling and evaluation at all program stages should be an intrinsic feature of the training system. This includes post-training follow-up and evaluation of individual trainees. Counseling, in this sense, is regarded as a planned, ongoing process, intrinsically a part of all pre-training, training, and post-training phases. Since trained counselors are, for the most part, employed in the public schools and as a result, would not be available for full-time counseling activities in MDTA programs, arrangements might be made to orient and employ part-time counselors on their off-hours, such as evenings, Saturdays, and during vacation periods.

Another possibility is the use of less-than-fully-qualified counselors, as is contemplated in the recent Labor Department program for recruiting and training 2,000 counselor aides and advisors. These counselor aides are selected from college graduates with a background in social work, sociology, or similar fields. Persons over 21 without college degrees but with appropriate backgrounds may also qualify as advisors. While the counselor aide program is aimed primarily at the guidance of youths 16 to 21, it offers possibilities also for organizing a similar program of counseling for educationally deficient adults.

These approaches do not, however, minimize the necessity for full-time qualified guidance counselors in MDTA programs for educationally deficient adults.

Techniques and procedures for evaluating trainee progress, for making trainee referrals to on-the-job training, to work-study arrangements, or to needed remedial training should be an on-going part of the training system. Thus, adult-oriented instruments for individual and group evaluation are needed. These should include literacy tests at beginning, intermediate, and advanced levels, interest inventories, achievement and aptitude tests, and skill performance tests. Present employment service data do not give a good picture of educational achievement nor native intelligence, and the aptitudes tested through employment service tests seldom have meaning for training purposes.

10. Supporting services, such as transportation, recreation and social activities, nursery care for trainees' children, food services, correction of impediments to learning, such as defective sight and hearing, are a few of the auxiliary services which will need to be provided for in the training system.

11. Local and regional assistance for the establishment of on-the-job and work-study programs by employers will need to be provided. This coordinating function could perhaps best be placed in the hands of the local MDTA Manpower Advisory Committee for more direct tie-in with overall manpower training and employment problems regularly handled by such committees.

12. Finally, research and development of adult educational and training techniques, materials, media, instruction, and counseling will help to make available the significant contributions of education, government, and industry to adult training technology. Continuing research is also necessary to provide for evaluation and modification of adult programs.

APPLICATION

Beyond the general conclusions and recommendations of this survey lie the tasks of implementing the training system. The broad features of such a system have been earmarked in the conclusions and recommendations. In fact, one of the primary objectives of this survey was the basic design for such a system.

In proposing the system, described in this section, the researchers were cognizant of the past work of many literacy and vocational educators and of recent experiments in training of undereducated adults—especially the MDTA demonstration projects, some of which were surveyed as part of this research project. The researchers were well aware also of techniques and approaches to adult training which have been borrowed from many fields of formal education and have been adapted to business and industrial uses in personnel development.

The proposed system, therefore, is more nearly the product of tested education-and-training know-how than a break with current practices. Moreover, many of the features of the system can readily be found in some form or other in many adult programs of education or training. The combining of the best practices and workable ideas into a single system, represents an empirically based solution to a difficult adult training problem. Moreover, the integrated systems approach seems to harmonize with a growing body of findings and conclusions that have come from recent research by universities, government, and private foundations.

The proposed design of a training system for meeting the combined basic education and training needs of educationally deficient adults is shown on page 39. This simplified design shows the relationship of key "sub-systems" within the basic system, such as recruitment, training, counseling, post-training follow-up, and job placement. The system is organized in three phases:

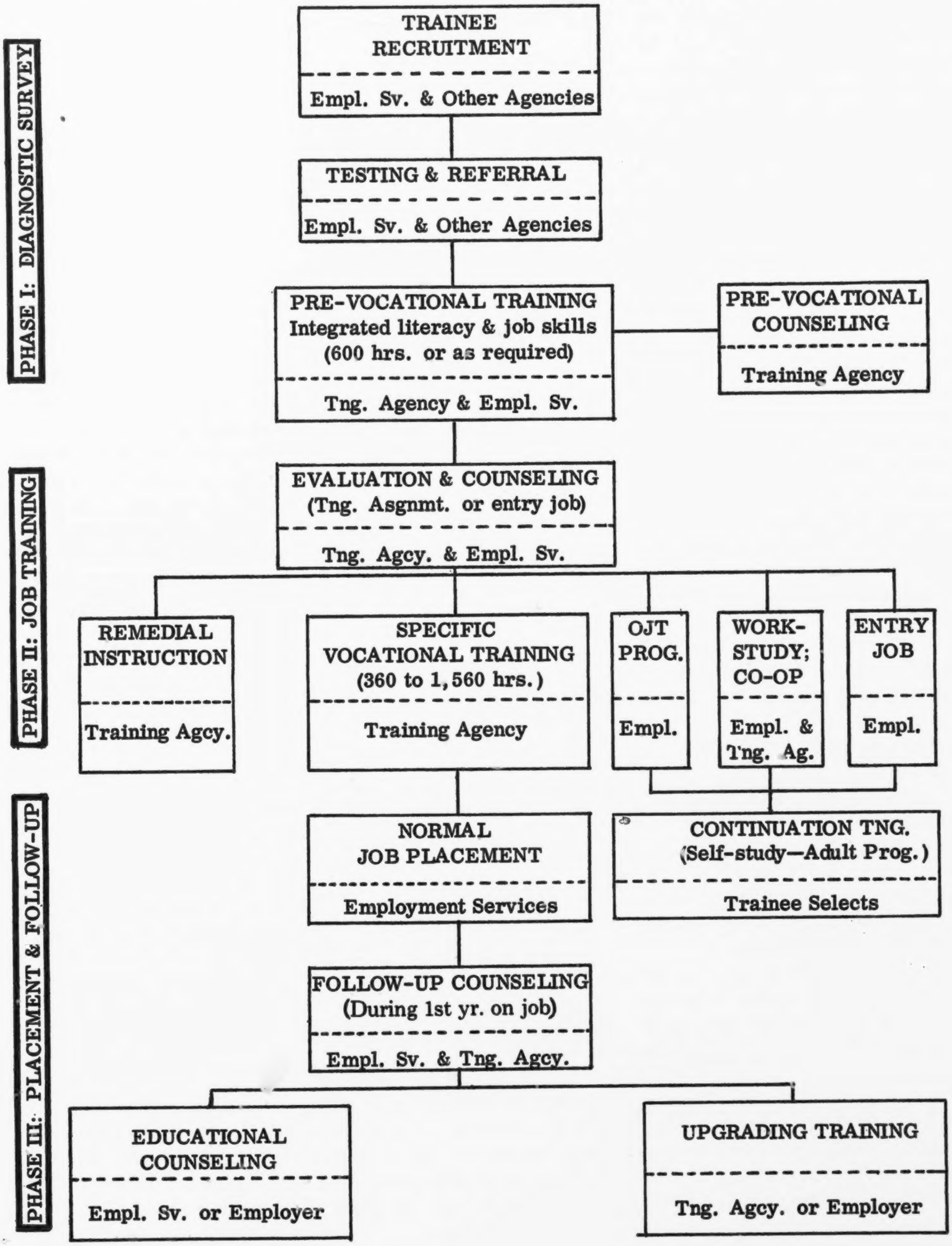
I. Diagnostic Survey

II. Job Training

III. Placement and Follow-up

These phases are explained in the following sections.

BASIC DESIGN OF TRAINING SYSTEM FOR EDUCATIONALLY DEFICIENT ADULTS


PHASE I: DIAGNOSTIC SURVEY
TRAINEE RECRUITMENT
Empl. Sv. & Other Agencies
TESTING & REFERRAL
Empl. Sv. & Other Agencies
PRE-VOCATIONAL TRAINING
Integrated literacy & job skills
(600 hrs. or as required)
Tng. Agency & Empl. Sv.
PRE-VOCATIONAL COUNSELING
Training Agency
PHASE II: JOB TRAINING
EVALUATION & COUNSELING
(Tng. Asgnmt. or entry job)
Tng. Agcy. & Empl. Sv.
REMEDIAL INSTRUCTION
Training Agcy.
SPECIFIC VOCATIONAL TRAINING
(360 to 1,560 hrs.)
Training Agency
OJT PROG.
Empl.
WORK-STUDY; CO-OP
Empl. & Tng. Ag.
ENTRY JOB
Empl.
PHASE III: PLACEMENT & FOLLOW-UP
NORMAL JOB PLACEMENT
Employment Services
CONTINUATION TNG.
(Self-study—Adult Prog.)
Trainee Selects
FOLLOW-UP COUNSELING
(During 1st yr. on job)
Empl. Sv. & Tng. Agcy.
EDUCATIONAL COUNSELING
Empl. Sv. or Employer
UPGRADING TRAINING
Tng. Agcy. or Employer

PHASE I. DIAGNOSTIC SURVEY

Phase I is, as its title implies, an orientation phase which takes the trainee from the point of his recruitment and referral to training, through an evaluation of his interests, aptitudes, and skills, to his pre-vocational training in at least one broad job family. Throughout this phase, individualized counseling and a growing familiarity with the skills needed for successful job entry, along with needed literacy training, bring the trainee to the crucial point at which the next step in his development can be decided. This phase might be called a "get-ready" period for the trainee, and includes the following elements.

1. *Recruitment* of educationally deficient adult trainees is undertaken by the State employment services or other community agencies.

2. *Testing and referral* to pre-vocational training is done by the State employment services and by the training agencies.

3. *Pre-vocational training* may cover as many weeks as required of integrated literacy and multi-occupational, family-of-job skills. (The diagram (p. 39) shows twenty 30-hour weeks (600 hours) for demonstration purposes). Literacy skills include adult reading, writing, arithmetic, science, social training, and health and sanitation in an adult job-oriented context. Skill training involves an exploratory survey of a job family covering several important semi-skilled or skilled entry job areas for which trained personnel are needed in the near future. Job families (Industrial, Service, or others) may be selected to conform to area and trainee needs. To increase trainee interest and to set up realistic goals in early pre-vocational training, it seems practical to closely associate literacy skill training and job skill training in short, easily achieved units of instruction.

4. *In-Program Counseling,* both group and individual, is provided at all stages of pre-vocational training by full-time or part-time training agency counselors. This may include personal, educational, and pre-vocational counseling.

PHASE II. JOB TRAINING

This phase gets the trainee into specific job training for an occupation which is available and in which he has demonstrated interest and aptitudes during Phase I.

1. *Trainee Evaluation and Counseling for Assignment.* Upon completion of pre-vocational training, the trainee is evaluated, counseled, and assigned, according to demonstrated ability, to remedial training, to specific vocational training, or to a part-time or full-time job.

2. *Remedial Training.* If the trainee, upon completion of the evaluation following Pre-vocational Training, needs remedial work in literacy or additional job orientation, or both, he is assigned to individual tutelage or other highly individualized instruction until he can meet the standards for entry into specific vocational training.

3. *Specific Vocational Training.* This type of training provides direct preparation for a specific job. By this time, the trainee has demonstrated his ability in the basic literacy skills and his occupational aptitudes have been diagnosed. He is now ready to begin immediate preparation for a specific job. This period of job training may comprise 360 to 1,560 hours of training depending on the training period required for the specific occupation selected.

4. *Early Job Assignment.* If the trainee demonstrates unusual progress, he may, instead of taking the specific vocational training, receive early placement in a job-with-training situation—an on-the-job program, a work-study, or a cooperative type of program in which he works on a job for a period and continues his training under either his employer or the training agency. On the other hand, the trainee may be found capable of taking a full-time job opening, in which case he moves directly into a job without the intermediate step of vocational training. In any event, his training is continued either through his employer, through self-study, or through adult programs locally available.

PHASE III. PLACEMENT AND FOLLOW-UP

Normally, the trainee will complete the full cycle of Pre-vocational and Specific Vocational Training before entering an available occupation. Phase III provides for job placement and continuous follow-up of the trainee even after such job placement. The assumption here is that the trainee will require additional guidance and counseling in making the transition from the training situation to the work situation.

1. *Job Placement.* The trainee is placed in an available semi-skilled or skilled entry job—one in which he has successfully demonstrated aptitude and interest during the training period. This placement is handled by the employment service.

2. *Continuation Training.* The trainee's education does not end with the termination of his specific vocational training. At the time he is placed on a job, he is counseled concerning continuation training, perhaps directed to adult programs which prepare him for an elementary or high school equivalency certificate—or to further job training.

3. *Trainee Follow-up.* This is made by the employment services for at least 1 year after the trainee's placement to determine his effectiveness on the job. At regular periods, the employment service or the employer interviews the individual and offers any needed educational counseling. At those times also, the employer considers the possibility of further training to upgrade the individual's job skills to enable him to qualify for promotion.

Any proposed system for solving the problem complex of educationally deficient adults cannot be designed simply within one narrowly preconceived framework. For example, the varying needs of the foreign-born and the native-born would seem to call for different solutions in handling problems of recruitment, motivation, counseling, instruction, and perhaps job placement. Even these two major groups may be composed of sub-groups which differ from each other enough to require different approaches to solving specific group problems.

The design of the basic system should provide flexibility in meeting the varying needs of different trainee groups. This perhaps can be accomplished by developing instructional modules[1] which, while they provide for group differentiation, are still compatible with the basic system, and provide for ready adaptation to varying needs. Thus, a word recognition "module" for the foreign-born may differ considerably from that for the native-born. Likewise, "building blocks"[2] of integrated literacy and job training may be needed in the pre-vocational stage to provide for flexible adaptation of training units to varying groups.

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[1] The word "module" is borrowed from the field of electronics. It is an assembly of wired electronic components performing a specific control function. Modules are prefabricated and can be quickly inserted or removed to alter a machine's operation, thus making unnecessary the time-consuming rewiring of whole circuits when machine failure occurs. An instructional "module," by analogy, is conceived as a complete instructional package containing all necessary trainee, instructor, and audiovisual materials for a short unit of instruction. If designed according to a basic pattern, these instructional modules can be used interchangeably in many programs to adapt them for special purposes or for specific trainee needs without necessitating development of a complete new program whenever special needs must be met.

The basic training system design proposed here is comparable to a mechanical or electrical system consisting of several complex components or subsystems which perform different functions but are all integrated according to a single master plan.

Thus, the proposed training system for educationally deficient adults might embrace several subsystems such as (1) an integrated basic education and job training subsystem, (2) a counseling subsystem, and (3) a staff training subsystem. This system should be designed so that all subsystems directly support the basic system without unnecessary duplication or overlap. As proposed here, the system needs to be designed with the special and peculiarly adult needs of jobless, educationally deficient persons in mind. Such a system does not now exist in its entirety. It is needed. It can be developed.

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[2] The term "building blocks" refers to the use of short "blocks" of instruction which are similar in their basic design but differ in their specific content. Individual blocks can be used flexibly to build or revise programs in somewhat the same way that uniformly designed building blocks are used to build various types of structures. Like the instructional module, building blocks of training materials provide economy and give flexibility to program development or adaptation.

APPENDIX A. SAMPLE QUESTIONNAIRE

SURVEY OF EDUCATIONAL AND TRAINING NEEDS OF EDUCATIONALLY DEFICIENT ADULTS

The purpose of this survey is to gather information about the nature and extent of education and training for the adult educationally deficient in the area served by your activities. The survey is being carried out by McGraw-Hill, Inc., in cooperation with, and under contract to, the U.S. Office of Education.

The data-gathering phase of the survey involves the use of this questionnaire and subsequent on-site studies of literacy skills projects in a number of local areas across the country. The information you furnish in this questionnaire will be compiled and analyzed with that from other sources for the purpose of developing guidelines for meeting the fundamental education and training needs of educationally deficient adults, who, because they lack basic literacy training, are unable to go on to regular vocational training.

Undoubtedly, the total problem of meeting the needs of the educationally deficient goes deeper than basic literacy education. A comprehensive approach to the problem concerns individual motivation, the existence of realistic local employment opportunities, as well as many factors associated with the lack of skills, knowledge, and attitudes which restrict educationally deficient adults from realizing their individual potential and becoming productive members of the nation's workforce.

Meeting the local training and job needs of the educationally deficient is necessarily a cooperative private and public responsibility. It is a problem which requires a united, frontal approach involving the coordinated actions of industry, churches, social agencies, government agencies, labor organizations, and schools.

This survey is concerned with what has been done, is being done, and can now be done to provide basic education and job motivation for adults whose level of literacy precludes their entry into occupational training programs provided under the Manpower Development and Training Act and the Area Redevelopment Act. This questionnaire, therefore, requests not only specific information about education and training activities but also seeks insights to the aptitudes, interests, job-and-training attitudes and job experiences of educationally deficient adults in localized areas of the country.

On the back of this page are certain definitions that will assist in the uniform processing of the information you submit. Please read these before filling in the questionnaire.

SURVEY TERMS

(Please refer to these terms, as defined, when responding)

Educationally Deficient Person. An adult who has the potential mentality and the physical capabilities to become employable, but is now unemployed, underemployed, or working at considerably less than his potential because his present mastery of fundamental literacy and social skills does not enable him to benefit from job training for occupations available in his locale.

Literacy Skills. Fundamental "tool" skills, such as reading, writing, arithmetic, science, health and sanitation, and citizenship which enable an adult to meet the day-to-day requirements of his occupational, civic, social, and personal life.

Occupational Training. Planned activities to develop and improve knowledge, skills, and attitudes or to modify behavior so as to prepare a person for, or to improve his performance on a specific job. Most occupational training requires of the trainee a degree of mastery of the basic literacy skills as prerequisites to job training.

Job Opportunities. Occupational opportunities which are currently available, or which will develop within the immediate future in the locale of the educationally deficient person and for which he can qualify through literacy education and occupational training.

Trainability. Refers to the ability of an educationally deficient person to master at least the minimal literacy skills required by pre-job training and, subsequently, to prepare himself, through training, to qualify for entry in a new occupation.

Name of Institution or Organization____________________

Address____________________

Number of Educationally Deficient Adults Participating in Current Literacy Skills Activities

____

Name and Title of Respondent____________________

1. Estimate the total number of educationally deficient, but trainable, adults in the geographic area covered by your adult literacy skills program activities.

2. What do you consider the primary problems to attack in meeting the educational and training needs of the educationally deficient adult in your area?

3. What limitations are there in your area which present obstacles to solving these problems?

4. What are the basic characteristics of adult educationally deficient persons in your area as to
   - Age
   - Sex
   - Educational level
   - Learning capacity
   - Employability
   - Level of motivation
   - Physical capability
   - Other
   - Remarks:

5. Please check the adult literacy skills projects which your institution has used, is now using, or is planning to use.

Project	Have used	Now use	Plan to use
Adult Reading	________	________	________
Adult Writing	________	________	________
Adult Arithmetic	________	________	________
Adult Science	________	________	________
Adult Health and Sanitation	________	________	________
Adult Citizenship	________	________	________
Other (Please specify)	________	________	________

Remarks:

6. Name by title the projects you now offer in the following literacy skills areas. Also show the length of the teaching periods and the total number of hours of instruction included in each activity you name.

Space for responses to the questions has been condensed in reprinting the questionnaire for this report.

		Program titles	Length of teaching period	Hours of instruction
a.	Adult Reading			
b.	Adult Writing			
c.	Adult Arithmetic			
d.	Adult Science			
e.	Adult Health and Sanitation			
f.	Adult Citizenship			
g.	Other			

Remarks:

7. How many participants started programs you offered in last year of record? How many completed the programs they started? Please fill in year of record.

	Literacy Skills Area	Number Starting in Year 19	Number Completing in Year 19
a.	Adult Reading		
b.	Adult Writing		
c.	Adult Arithmetic		
d.	Adult Science		
e.	Adult Health and Sanitation		
f.	Adult Citizenship		
g.	Other		

Remarks:

8. Check types of instructional materials you use in adult literacy skills activities and your sources for these materials.

	Instructional Materials	Not Used	Prepared Internally	Commercial Materials	Special Materials Prepared by Outside Agencies
a.	Texts				
b.	Workbooks				
c.	Instructors' Manuals				
d.	Audio-Visual Aids				
e.	Other (specify)				

Remarks:

9. List in order of importance the instructional materials checked above which you have found most effective in teaching adult literacy skills.

1.

2.
3.
4.
5.

Remarks:

10. Where do you normally look for instructional materials in adult literacy skills? Please mark prime source in the left column by the figure 1 and other sources 2,3,4, etc., in order of importance. Show also the subject areas obtained from each source indicated.

Source	Subject Areas
_____Federal Agencies	______________________________
_____State Agencies	______________________________
_____Local Organizations	______________________________
_____Libraries	______________________________
_____Labor Unions	______________________________
_____Industry and Business	______________________________
_____Book Publishers	______________________________
_____Prepare Own Materials	______________________________
_____Other	______________________________

Remarks:

11. What group and individual methods do you use in teaching adult literacy skills? Please check each applicable method and mention the literacy skills areas in which each method is used.

Group Methods	Used In
_____Demonstrations	______________________________
_____Group Discussion	______________________________
_____Commercial TV	______________________________
_____Open Circuit ETV	______________________________
_____Closed Circuit ETV	______________________________
_____UHF	______________________________
_____Radio	______________________________
_____Other group methods	______________________________
Individual Methods	
_____Self-study	______________________________
_____Programed Instruction Materials	______________________________
_____Teaching Machines	______________________________
_____Individual Tutoring	______________________________
_____Other individual methods	______________________________
	______________________________

Remarks:

12. Which teaching methods and techniques have you found most effective in each of the following literacy skills areas?

Literacy Skills Area	Most Effective Method
Adult Reading	______________
Adult Writing	______________
Adult Arithmetic	______________
Adult Science	______________
Adult Health and Sanitation	______________
Adult Citizenship	______________
Other (specify)	______________

Remarks:

13. How do you objectively determine the specific educational needs of the educationally deficient adult in your area?

_____Interview participants
_____Make own local surveys
_____Use local, state, or federal government data
_____Use standardized test data
_____Other (please specify)

Remarks:

14. How do you evaluate the outcomes of your adult literacy skills activities?

15. Indicate the sources from which you obtained the teachers used in your adult literacy skills activities. Show the number of teachers from each source and also the total number of courses they teach each day.

Sources	No. From Each Source	Total No. Courses Taught Each Day
a. Local day schools	________	____________
b. Adult education programs	________	____________
c. Colleges	________	____________
d. Business and industry	________	____________
e. Other sources (list)	________	____________

Remarks:

16. What are the teaching credentials and extent of employment of teachers in your adult literacy skills activities?

	Certification	Number Employed Full Time As Adult Literacy Skills Teachers	Number Employed Holding Other Full-Time Jobs	Number Employed Holding Other Part-Time Jobs
a.	Certified adult education teachers			
b.	Certified elementary school teachers			
c.	Certified in other educational field			
d.	College graduates, not certified teachers			
e.	Some college, but not certified teachers			
f.	Other			

Remarks:

17. Mention any special literacy workshops, seminars, or other programs used in the training of adult literacy skills teachers. Who sponsors these teacher-trainer programs and how many hours does each program devote to such adult literacy teacher training?

Teacher-Training Program	Sponsored By	Hours

Remarks:

18. What activities would you consider most realistic in meeting the educational and training needs of the adult educationally deficient in your community?

19. What comments can you make about the attitudes of adult educationally deficient persons toward jobs and training in your area?

20. What methods have you found most effective in encouraging the adult educationally deficient to participate in literacy skills programs?

21. What specific efforts are presently being undertaken or are planned in your area to mesh current adult job training with immediate or near-future job opportunities?

22. How have community resources, such as industry, churches, social agencies, government agencies, labor organizations, and schools coordinated local efforts toward meeting

the training and job needs of the educationally deficient?

23. Use this space for any additional ideas, facts, or suggestions concerning your adult literacy skills activities not covered elsewhere in this questionnaire.

Thank you

Please return the completed questionnaire in the enclosed stamped, self-addressed envelope.

APPENDIX B. INTERVIEW GUIDE FOR STATE EMPLOYMENT SERVICE OFFICES

Office____

Address____

Interviewee (s)____________________________________

Interviewer___________________________ Date______________

1. How many educationally deficient adults are there in the areas served by your office?
2. What are the basic characteristics of these adults?
3. What present and near-future job opportunities are there for educationally deficient adults in your area?
4. Identify the specific skills (including literacy skills) required for these jobs. (Use DOT classifications.)
5. Identify current training opportunities to prepare educationally deficient adults for these jobs.
6. Determine pre- and post-employment training gaps which educationally deficient adults will need to fill to prepare themselves for existing job opportunities.
7. Obtain any organized information (reports, surveys, analyses, etc.) to support Items 1-6.

APPENDIX C. REFERENCES

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Statement of Lt. Gen. Lewis B. Hershey, Director of Selective Service, Before the Subcommittee on Employment and Manpower of the Committee on Labor and Public Welfare, United States Senate. Nov. 22, 1963.

U. S. Department of Health, Education, and Welfare, Office of Education, Literacy and Basic Elementary Education for Adults. Washington: U. S. Government Printing Office. 1961.

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__________, *The Insured Unemployed, September, 1963.* Washington.

__________, Bureau of Labor Statistics, *Education Attainment of Workers, March 1962.* Washington: U.S. Government Printing Office. May, 1963.

__________, *Industrial Retraining Programs for Technological Change.* A Study of the Performance of Older Workers, Bulletin No. 1368. Washington: U.S. Government Printing Office. June, 1963.

__________, Office of Manpower, Automation, and Training, *Department of Labor Programs with Respect to Automation and Technological Change*. Washington: OMAT, Oct. 1, 1963.

__________, *Family Breadwinners: Their Special Training Needs*. Washington: U.S. Government Printing Office, 1964.

__________, *Manpower and Training—Trends, Outlook, Programs*. Manpower Research Bulletin No. 2. Washington: U.S. Government Printing Office. July, 1963.

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__________, *Selected Manpower Indicators for States*, Manpower Research Bulletin No. 4. Washington: U.S. Government Printing Office, Nov. 1963.

__________, *Training Disadvantaged Groups Under the Manpower Development and Training Act.* Manpower Evaluation Report No. 1. Washington: U.S. Government Printing Office. Nov. 1963.

University of the State of New York, the State Education Department, Bureau of Adult Education, *Americanization and Adult Elementary Education Bibliography*. Albany, N.Y., 1960.

APPENDIX D. QUESTIONNAIRE RESPONDENTS

Program	Type of Program
Adult Vocational Project #230 Pittsburgh, Pa.	MDTA Adult
Armstrong Adult Education Center Washington, D. C.	MDTA Adult
Board of Education Niagara Falls, N. Y.	Public School
Board of Fundamental Education Indianapolis, Ind.	Private Foundation
Dysart School Peoria, Ariz.	MDTA Demonstration Project
Lark Foundation Yakima, Washington	Private Foundation
Los Angeles Public Schools Los Angeles, Calif.	Public School
New Haven School System New Haven, Conn.	Public School
New York City Board of Education New York, N. Y.	MDTA Public School
O'Fallon Technical High School St. Louis, Mo.	MDTA Youth
Richmond Public Schools Richmond, Va.	Public School
Rochester Board of Education Rochester, N. Y.	Public School
Seattle Public Schools Adult and Vocational Division Seattle, Washington	Public School
Treasure Valley Community College Ontario, Oreg.	MDTA Adult

APPENDIX E. PROGRAMS VISITED

Adult Vocational Project #230 Pittsburgh, Pa.	MDTA
Armstrong Adult Education Center Washington, D. C.	MDTA Adult
Beckley Adult School Beckley, W. Va.	ARA
Dysart School Peoria, Ariz.	MDTA Demonstration
New York Board of Education New York, N. Y.	Public School and MDTA
O'Fallon Technical High School St. Louis, Mo.	MDTA Youth
Richmond, Va.	Public School

APPENDIX F. EMPLOYMENT SERVICE OFFICES VISITED

Arizona State Employment Service
1717 W. Jefferson
Phoenix, Ariz.

Missouri State Employment Service
505 Washington Street
St. Louis, Mo.

New York State Employment Service
Manhattan Industrial Office
247 W. 54th St.
New York, N. Y.

Pennsylvania State Employment Service
Clerical and Professional Office
327 Fifth Ave.
Pittsburgh, Pa.

Pennsylvania State Employment Service
Service and Domestic Office
627 Penn Ave.
Pittsburgh, Pa.

Service Industries Office
255 W. 54th St.
New York, N. Y.

United States Employment Service
for District of Columbia
555 Pennsylvania Ave., NW.
Washington, D. C.

Virginia State Employment Service
5 South 7th St.
Richmond, Va.

West Virginia State Employment Service
211 Broad St.
Charleston, W. Va.

APPENDIX G. PUBLISHED MATERIALS USED IN PROGRAMS VISITED

AUTHOR	TITLE	PUBLISHER	WHERE USED
Dolch, E.W.	Basic Sight Vocabulary Cards	Garrard Press Champaign, Ill.	Washington, D.C.
____________	The Job Ahead (New Rochester Occupations Reading Series)	Science Research Associates Chicago, Ill. 1963	St. Louis, Mo. Washington, D.C.
Gates, Arthur I. and Celeste C. Peardon	Practice Exercises in Reading A & B	Teachers College New York 1963	Washington, D.C.
Guyton, Mary L. and Margaret Kielty	From Words to Stories	Noble & Noble New York 1950	Washington, D.C.
Laubach, Frank C.	Reading Readiness Charts and Stories	Harper New York	Washington, D.C.
____________	Streamlined English	Macmillan Company New York 1951	Lark Foundation Washington, D.C.
Readers Digest Series	Reading Skill Builders I, II, III	Readers Digest Educational Service Pleasantville, N.Y.	Pittsburgh, Pa. Washington, D.C.
Roberts, Clyde	Word Attack: A Way to Better Reading (Gr. 11-12)	Harcourt, Brace, and World, Inc. New York 1956	Washington, D.C.
Robertson, M.	Learning and Writing English	Steck Company Austin, Texas 1950	Lark Foundation Washington, D.C.
Schoolfield, Lucille and Josephine B. Timberlake	Sounds the Letters Make	Little, Brown & Co. Boston 1946	Lark Foundation
Spello, J.M.	Classroom Reading Clinic	Webster Publishing Company St. Louis, Mo. 1963	Washington, D.C.

AUTHOR	TITLE	PUBLISHER	WHERE USED
————	Curriculum Correspondence Courses	University of Nebraska	Richmond, Va.
Stump, Gladys	Pro-Reading Instructor's Manual	Reading House Phoenix, Ariz. 1963	Peoria, Ariz.
————	Pro-Reading Series I Elementary II Intermediate III Advanced	Reading House Phoenix, Ariz. 1963	Peoria, Ariz.
Wallace, Mary	Arithmetic Is Fun	Lark Foundation Yakima, Wash.	Lark Foundation
————	Literacy Teachers' Manual	Lark Foundation Yakima, Wash.	"
————	People And Stars	Lark Foundation Yakima, Wash.	"
Weiss, Herbert M.	The Science of Reading and Spelling (Teacher's Manual)	Weiss Publishing Co. Richmond, Va. 1946	Richmond, Va.
————	Sure Steps to Reading and Spelling	Weiss Publishing Co. Richmond, Va. 1946	"

APPENDIX H. ADDITIONAL SUGGESTED BIBLIOGRAPHY FOR UNDEREDUCATED ADULTS

AUTHOR	TITLE	PUBLISHER
Baldwin, Orrel, and Strumpf, B. E.	Living In Our Neighborhood	Noble New York 1957
Baltimore Public Schools Dept. of Education Div. of Adult Education	Experimental Work Book in Arithmetic: Division of Whole Numbers for Instruction of Adults.	The Department Baltimore 1953
Boggs, Ralph S., and Dixon, Robert J.	English Step by Step With Pictures	Noble & Noble New York 1956
Boylan and Taylor	Graded Drill Exercises in Corrective English, Book III	Noble & Noble New York (n. d.)
Bright, E. L., Mitchell, E. C., et. al.	Home and Family Life Series plus Teacher's Manual	Arthur Croft New London, Conn. 1954 rev.
Cass, Angelica W.	Everyday English and Basic Word List for Adults	Noble & Noble New York 1960
Cass, Angelica W.; Hays, Mary; and Thomas, Lydia	First Patrol and Other Stories (Adult Education Reader—Intermediate level)	Readers Digest Pleasantville, N. Y. 1954
____________	How We Live	Noble & Noble New York 1949
Feingold, S. Norman	Words for Work	Jewish Voc. Service Boston, Mass. 1949
Laubach, R. S.	News For You (Weekly newsheet, 30 issues)	Syracuse University Syracuse, N. Y.
____________	Reading For You: Publication Series "Trouble and the Police" "Customs and Courtesies in the United States." "Why You Need Insurance" "How To Find A Job"	Syracuse University Syracuse, N. Y. 1959

AUTHOR	TITLE	PUBLISHER
Owens, A. A., and Sharlip, W.	Elementary Education for Adults	Winston, Philadelphia 1943
Richards, I. A., and Gibson, C. M.	Words on Paper	Language Research Cambridge, Mass. 1943
Smith, Edwin H., and Lutz, Florence R.	My Country	The Steck Company Austin, Texas 1956
Stanley Bowmar Company	Adult Education Filmstrips "Know Your Public Library" "Enjoy Your Community" "Know Your Community"	The Company Valhalla, N. Y. (n. d.)
U. S. Dept. of the Interior Branch of Education Bureau of Indian Affairs	"Buying and Selling Word Book" "Measurement Terms" "Tools For Measurement"	Seminole Adult Education Program (n. d.) Washington
U. S. Post Office	You and Your Post Office	Baltimore, Md. 1958
————	Golden Library: "Planets" "Mathematics" "Space Flight" "Atoms"	Golden Press New York (n. d.)

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